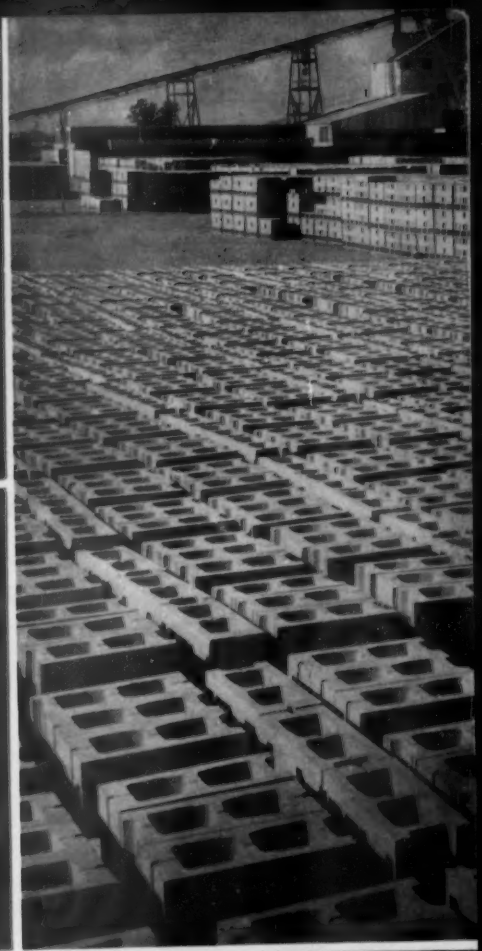
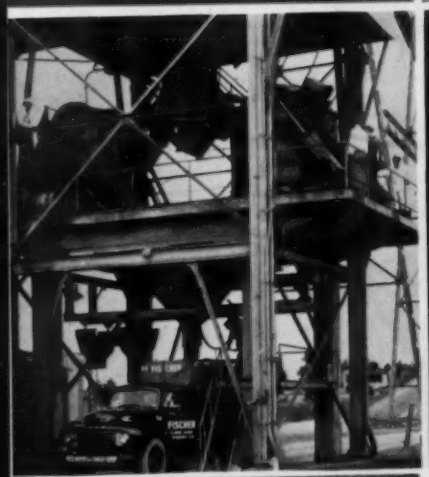
CONCRETE





OUR 52ND YEAR

Serving the Concrete Industries

OCTOBER / 1956

LITH-I-BLOCK'S MODERN FEATURES
MEAN MORE HIGH QUALITY
PRODUCTION AT LOWEST COST

PICK THE

LITH-I-BLOCK MACHINE

THAT'S BEST FOR YOU

ROTA-POSED® AGITATION — Interlocking fingers on three rotating shafts fill mold in a fraction of former time.

MICRO-JUSTABLE® VIBRATION—Calibrated weights adjustable to any vibration intensity desired.

HYDRAULIC POWER PACKAGE — 12.5% more power than used with other hydraulic block machines.

GUIDED PALLET SUPPORT AND STRIPPER — Extra heavy shafts guide vertical travel for perfect alignment.

4-POINT HEIGHT CONTROL — Built-in, positive — on every Lith-I-Block Machine, at no extra cost.

QUICK CHANGE MOLD BOX — Change over to another size block in twenty minutes, or less.

FRONT PALLET RETURN — One man operation with optional automatic front pallet return, right or left hand models.

YOUR CHOICE OF

HYDRAULIC or AIR POWER

IN EITHER

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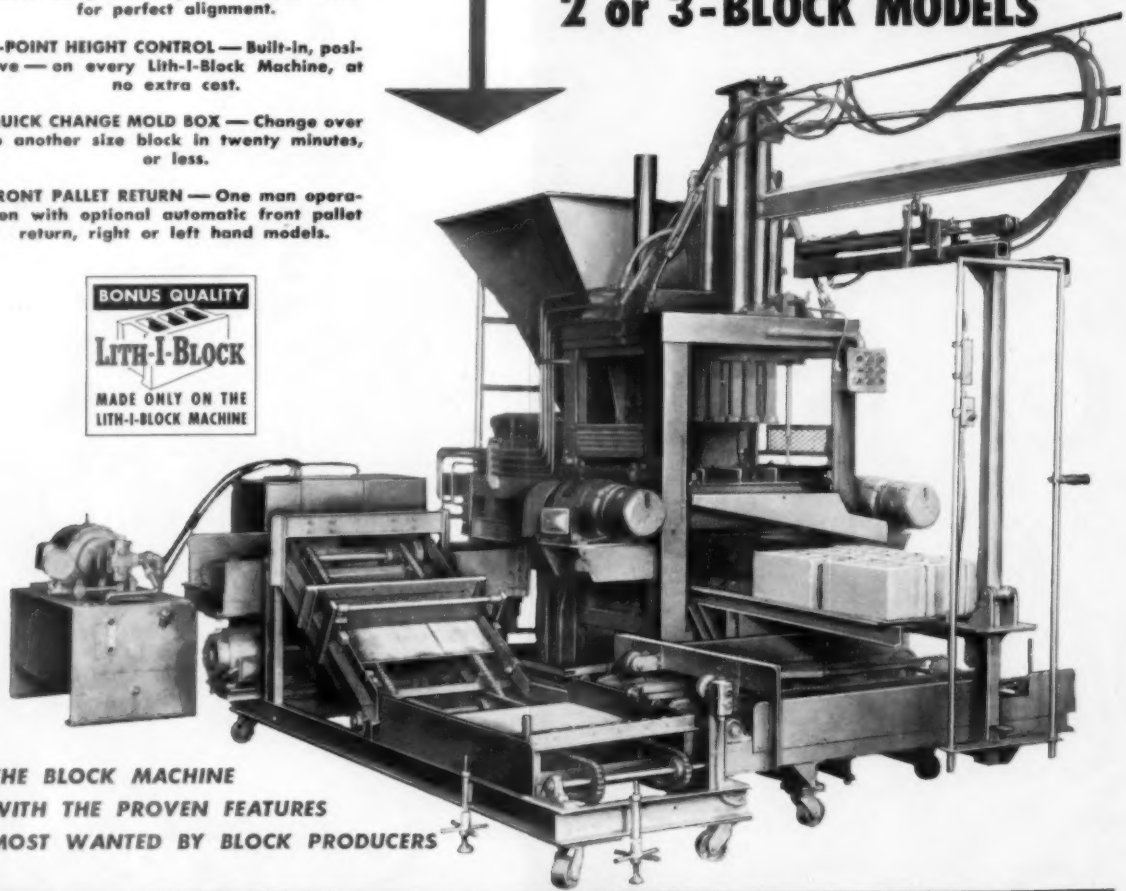
LITH-I-BLOCK
MADE ONLY ON THE LITH-I-BLOCK MACHINE



THE BLOCK MACHINE
WITH THE PROVEN FEATURES
MOST WANTED BY BLOCK PRODUCERS

SALES AND SERVICE THE WORLD OVER

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ONE PIECE OF EQUIPMENT OR A COMPLETE PLANT LAYOUT

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Send me latest bulletins on Lith-I-Block Machine.

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OCTOBER, 1956

CONCRETE

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The same engineers and skilled mechanics who design and build the famous Besser Vibrapac produce all parts for the machine . . . right in this great Besser plant at Alpena, Michigan. Our policy is not to "farm out" parts.

Genuine Besser Parts are identically the same as the parts used for the original equipment. They are made to exactly the same high standards. They have to be. Otherwise your Vibrapac would not give you the high output of quality block and steady uninterrupted performance for which it is noted.

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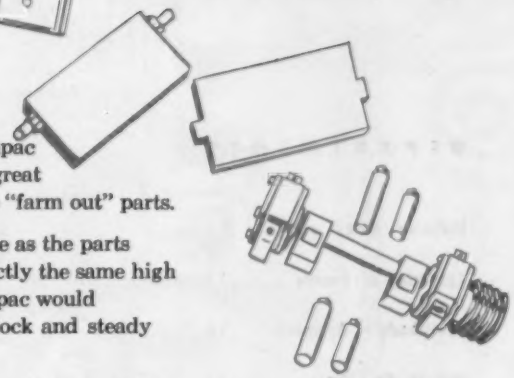
Get the *most* from your Vibrapac with *Genuine* Besser Parts.



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BESSER Genuine PARTS

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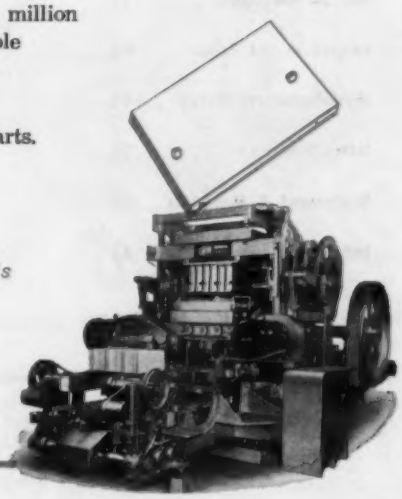

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FOR MODERN BLOCK PLANTS

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Simplified design assures speedy operation with the ultimate in safety for high pressure concrete block steam curing systems. Operated by a push-button controlled hydraulic unit, *Wedg-Lok Quick Opening Doors* feature a safety interlock warning device or optional positive safety system.

Write for Sales Bulletin SW-553

Struthers Wells **AUTOCLAVES**

Autoclaves are available from Struthers Wells in any design or capacity for high pressure concrete block steam curing system service. The unit illustrated includes a *Wedg-Lok Quick Opening Door.*

Titusville **BOILERS** Known for dependability since 1860. Our Titusville Division builds boilers in all required capacities and types for cement industry service.

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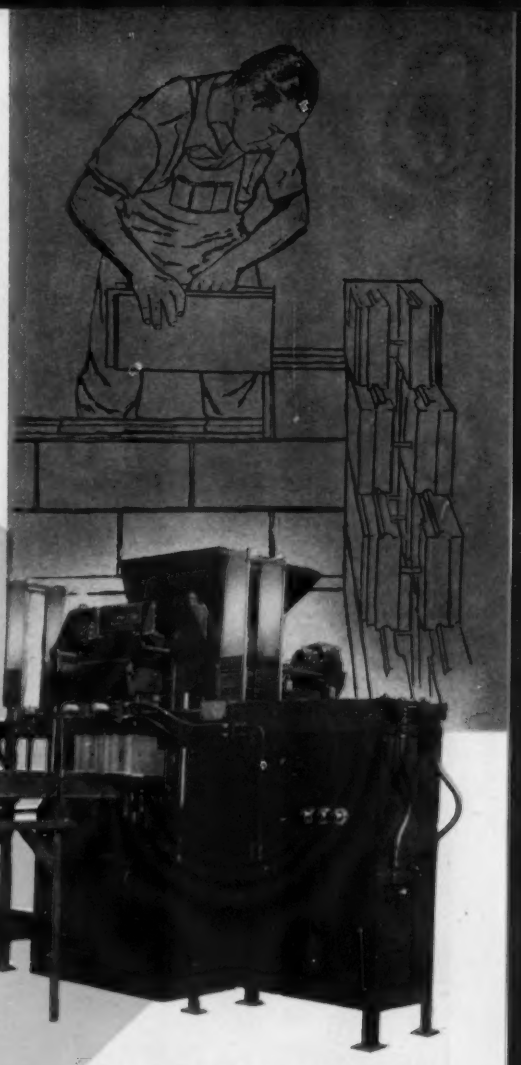
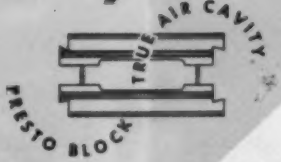


NOW... AUTOMATICALLY PRODUCED
on the world's most advanced hydraulically - operated, electronically - controlled concrete block machines at 4 to 6 cycles per minute. (Depending upon the type of aggregate used). Presto Blocks can be manufactured in 8-inch heights, or in the popular 12-inch heights so widely used by architects and builders. Presto Blocks are produced at the same speeds and costs—and with the same aggregates — as standard masonry units.

ONE STANDARD PRESTO PALLET
All shapes and sizes of Presto Block can be made on one standard pallet, including four cored partition blocks or two stretcher blocks, or two corner blocks, etc. Presto Pallets are ruggedly constructed for strength, durability and unusual long life.

Precision - manufactured Presto Block Machines are manufactured by Columbia Machine under U. S. and world-wide pats. and pats. pending.



COMPLETE SOUND, CLIMATIC AND MOISTURE INSULATION. Presto Block is the only *single-unit* block to build a true air-cavity twin wall. There is no masonry bond in either the individual block or the finished construction, due to the corrugated steel ties which unite the two walls of a Presto Block unit. The resultant through-air passage provides the finest insulation available... at an in-the-wall cost actually below that of standard block construction.

FAST, EASY ERECTION. Presto Blocks are keyed to lock upon erection, thus affording an ease and speed of construction not obtainable with conventional concrete masonry. Since no mortar is required—except for pointing of joints—all need for mortar tubs and heavy scaffolding is eliminated.

INDUSTRY ACCEPTANCE. Since our Presto Block announcement last month, hundreds of architects, builders and manufacturers have wired, written and talked to us by phone, requesting more information. The building industry has enthusiastically endorsed and accepted concrete masonry's most revolutionary advance—PRESTO BLOCK!

FOR THE COMPLETE PRESTO BLOCK STORY and information in regard to franchise arrangements, write, wire or phone.

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Empire State Building, New York, N. Y.
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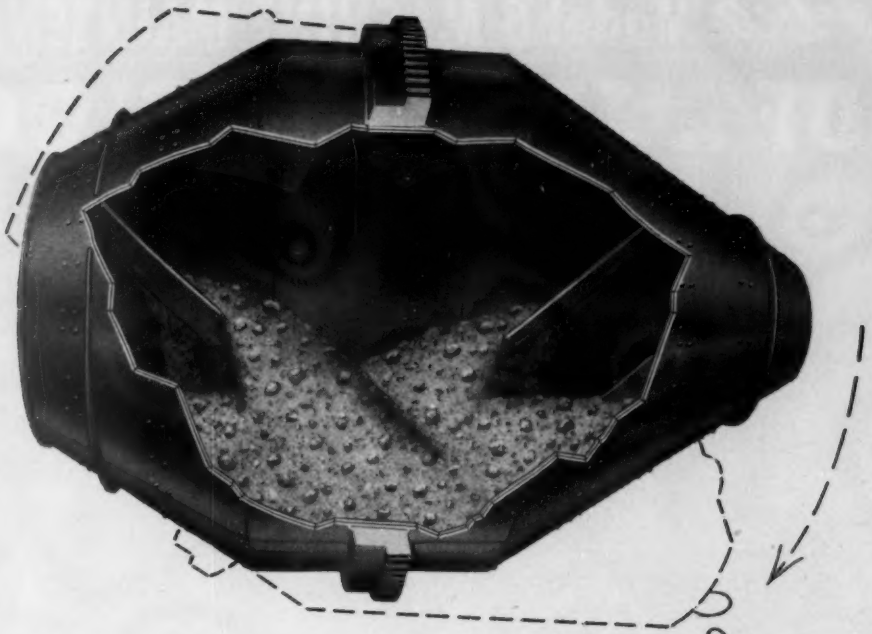
A NEW DIMENSION IN BUILDING



TILT in the right DIRECTION

You're looking at the inside story of a Smith Tilting Mixer. *The balance* between profits and costs *tilts way up in your favor* with these world-accepted mixers because no lifting of materials is necessary. *The batch is discharged simply by tilting the drum.*

Aggregates are folded over in the bottom of the drum — are lifted to a minimum degree. Materials can NOT drop down with a smash from top to bottom of the drum. Thus the greatest cause of wear is completely eliminated.

This is not possible with any other type of mixer. Long life, low maintenance cost are the result.

These Smith Tilters with their non-lift mixing easily handle large stones and boulders so frequently specified by engineers these days. That's an important plus value for you.

SIZES: 1, 2, 3, 4, 6, and 7½ yds. Write for details.

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A-8728-1P

Columbia Model 8 MACHINE MAINTENANCE

1/10 OF A CENT PER BLOCK!

Writes Warren C. Larson
of Larson Cement Stone Company,
Omaha, Nebraska.*

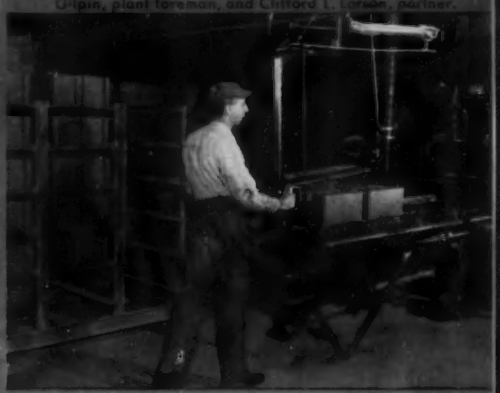
From left to right: Warren C. Larson, partner; Norman Gilpin, plant foreman, and Clifford L. Larson, partner.

Mr. Larson further states:

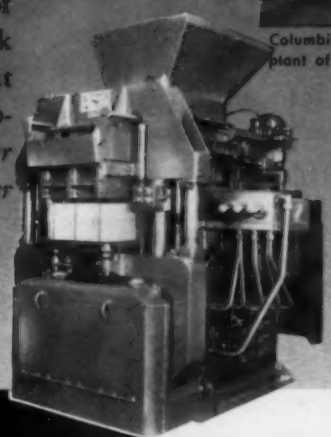
"Since installing our Columbia Model 8 we have manufactured over 1,600,000 equivalent units in all various shapes and sizes. Our *machine maintenance* cost has amounted to approximately *1/10 of a cent per block.* Figuring overall . . . our total machine and mold replacement parts costs have amounted to *1/4th of a cent per block.*

"Couple this with the fact that we are producing a block which has the very best of customer acceptance in a city where from 7 to 8 million blocks are sold every year . . . and you can see why we are very happy to be on the Columbia team."

Mr. Larson's comments are typical of those received from hundreds of block manufacturers who have found that Columbia Block Machines and equipment mean *greater production* at *less per unit cost* . . . with *proportionately higher profits.*



Columbia Model 8 (2-block) machine is shown in operation at plant of Larson Cement Stone Company, Omaha, Nebraska.



The complete text of Mr. Larson's letter will be sent on request.

If you are planning a new plant, a plant expansion or would like to discuss any production problem, write or phone us . . . and we will have a qualified man in your plant within 24 hours. No obligation. Call OXford 4-1501.

Columbia MACHINE

Home Office: 107 S. GRAND, VANCOUVER, WASHINGTON
Factory Branch and Warehouse at Mattoon, Illinois.

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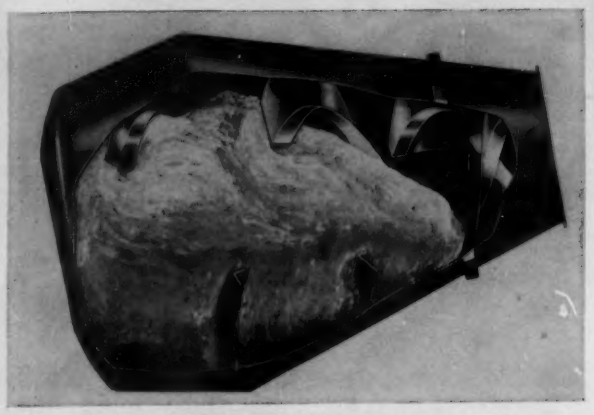
THERE ARE THREE VERY SIMPLE REASONS WHY

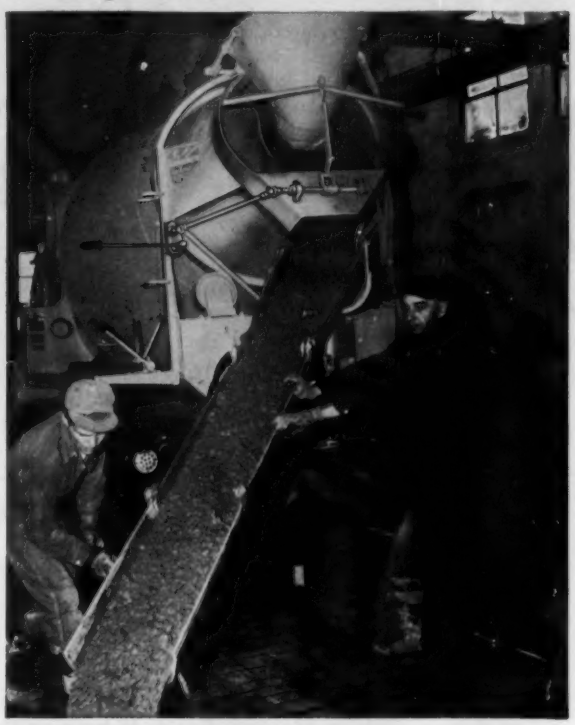
CMC Transcretes® make you more money



1 *FASTER CHARGING* CMC "Swing-In" Hopper has 56% larger opening and no sharp turns. Takes material super fast — a yard every 8 to 9 seconds — without any flash back of cement or spilling of aggregates.

2 *MORE THORO MIXING* Extra large diameter drum head plus deep "L" section blades assures greater mixing action per drum revolution. This guarantees faster, more thoro, more efficient mixing of any slump concrete.

3 *QUICKER DISCHARGE* Exclusive CMC "Swing-Out" Hopper is out of the way for discharge so concrete can come through big UNOBSTRUCTED opening in full, easily controlled stream. Handiest chute arrangement of all makes any pour simple, easy, fast.



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TRANSCRETES are America's only truck mixers with the famous CMC Floating Drive which eliminates the troubles of ordinary rigid drives. Still another reason why TRANSCRETES beat 'em all a country mile for pouring more and better concrete — easier, faster — and at less cost! There's a size TRANSCRETE (4 models, from 3½ to 7 yard mixing capacities) to do any job in the books. Get full details today.

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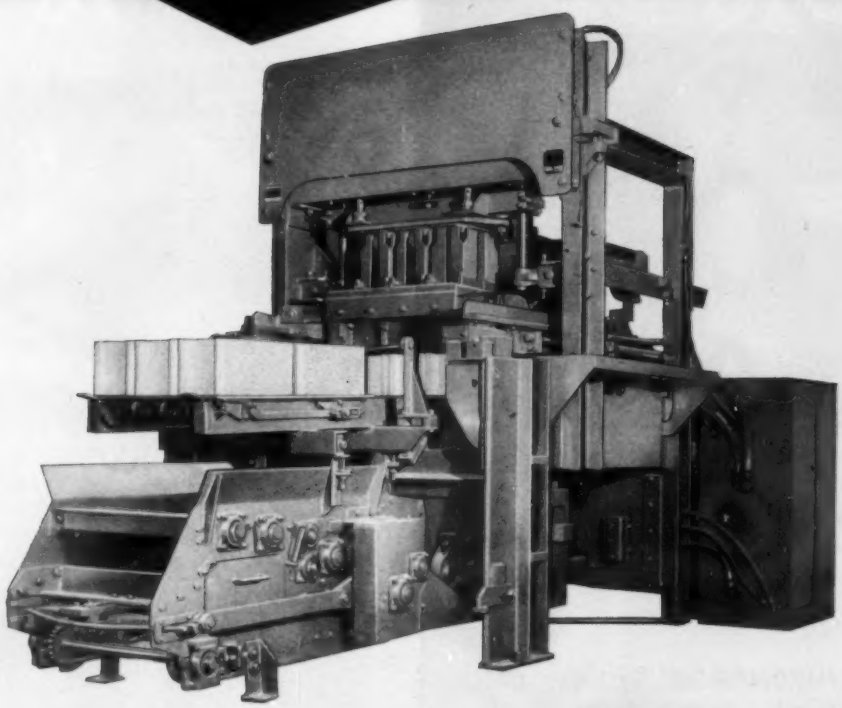

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HERE'S WHY

- **YOU USE LESS CEMENT**— Users tells us that GOCORP Plain Pallet machines use up to 10% less cement than competitive makes because they pack better.
- **YOU HAVE LESS DOWNTIME** —The smooth, unhurried hydraulic drive means trouble-free performance — slashes maintenance costs. A typical owner reports that his maintenance averaged less than two tenths of a cent per unit over a four-year period, **including mold boxes.**
- **YOU GET FEWER CULLS** — As low as one tenth of one percent of production they tell us. Green blocks have uniform density, stand up better during handling.
- **YOU GET GREATER PRODUCTION** — Sequence operation means easier, quicker adjustments. Higher production of **quality** block.
- **ADVANCED DESIGN**—Assures years of high production without fear of obsolescence.

MAKE US PROVE IT —
No foolin', write today and ask us for names, facts and figures to back up these statements.

AUTOMATION MEANS RACKMAN—for top in performance, it's the "Senior" plus RACK-MAN (GOCORP's revolutionary automatic rack loading device).

GO CORP
ADRIAN-MICH.
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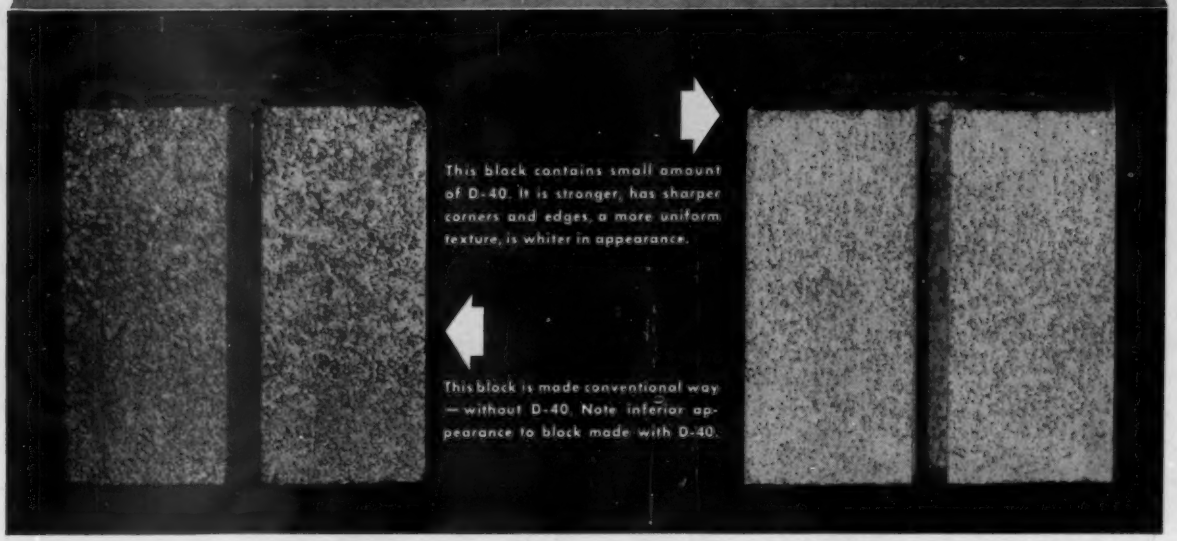
Use D-40 in block manufacture to—

INCREASE PROFITS

IMPROVE QUALITY CONTROL


This block contains small amount of D-40. It is stronger, has sharper corners and edges, a more uniform texture, is whiter in appearance.
This block is made conventional way —without D-40. Note inferior appearance to block made with D-40.

Low-cost, high active D-40 has proved over the years to be most effective in up-grading cast concrete products

The increase in plasticity, imparted by D-40 to the wet mix, results in a better flow into the molds; provides more uniform dispersion of the cement; gives smoother, lighter-colored products with fewer rejects.

Only ½ to 2 ounces of economical, ready-to-use D-40 is required per bag of cement.

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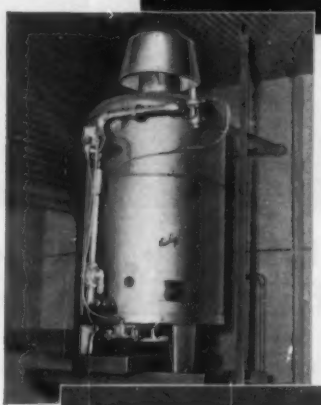

Burkay

Model 718

- A High-Recovery Water Heater—403 gal. per hr. at 100° rise. May be installed in multiple to meet larger needs.
- Remarkable operating economy.
- Instant response to load demands.
- All copper waterways guarantee no corrosion and long life.
- Compact. Easy to install.
- Trouble-free. All gases.

Burkays are light, compact. Easily fit overhead in out-of-the-way places.

• Freezing temperatures need not put a damper on your concrete mixing activities. The answer to this predicament—mix with hot water so that the concrete can "set" before it freezes; and heat your mixing water with a dependable, gas-fired Burkay Water Heater.

Burkays have many natural advantages for this use. They are light, compact, easy to install, and may be put in out-of-the-way places. They are portable, practically service-free, are flexible as to installing additional units.

The usual Burkay installation consists of a heater plus storage tank (recovery system) to supply a large volume of one-temperature hot water; smaller installations may use instantaneous heaters.

See your nearest A. O. Smith Burkay distributor for information.

Through research ... a better way

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Permaglas Division, Kankakee, Illinois, Dept. C-1056
Please send me helpful data on water heaters for Redi-Mix Plants.

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All motors and component parts, designed specifically to deliver "super-power" to meet today's demand for higher production.

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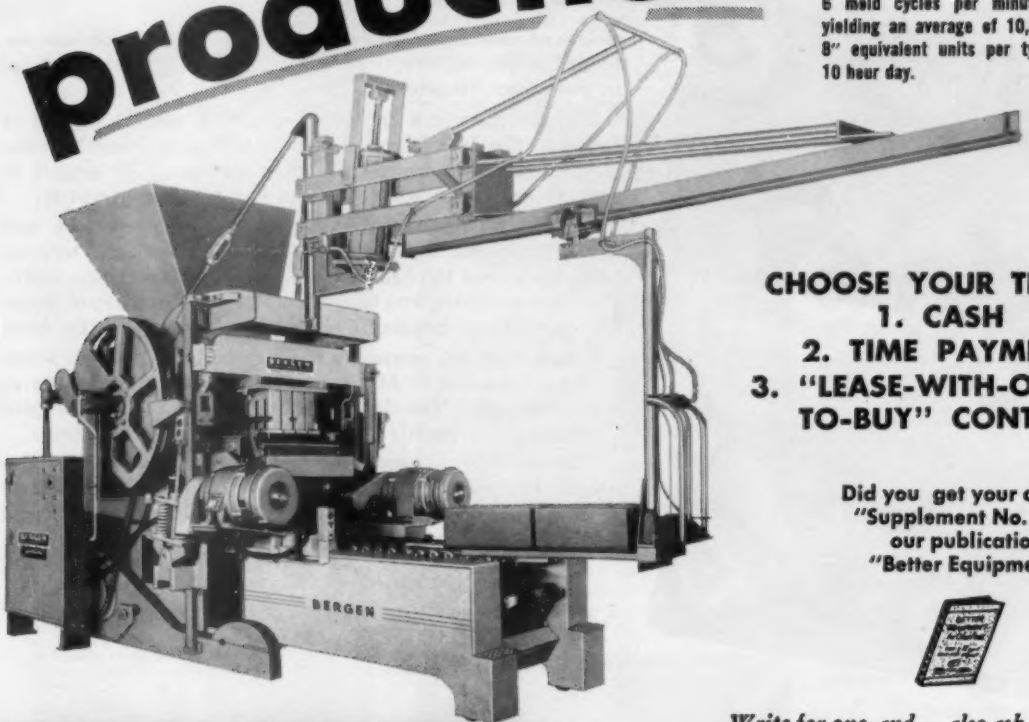
Increase your production up to 6 mold cycles per minute — yielding an average of 10,000—8" equivalent units per typical 10 hour day.



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MACHINE & TOOL CO., INC.

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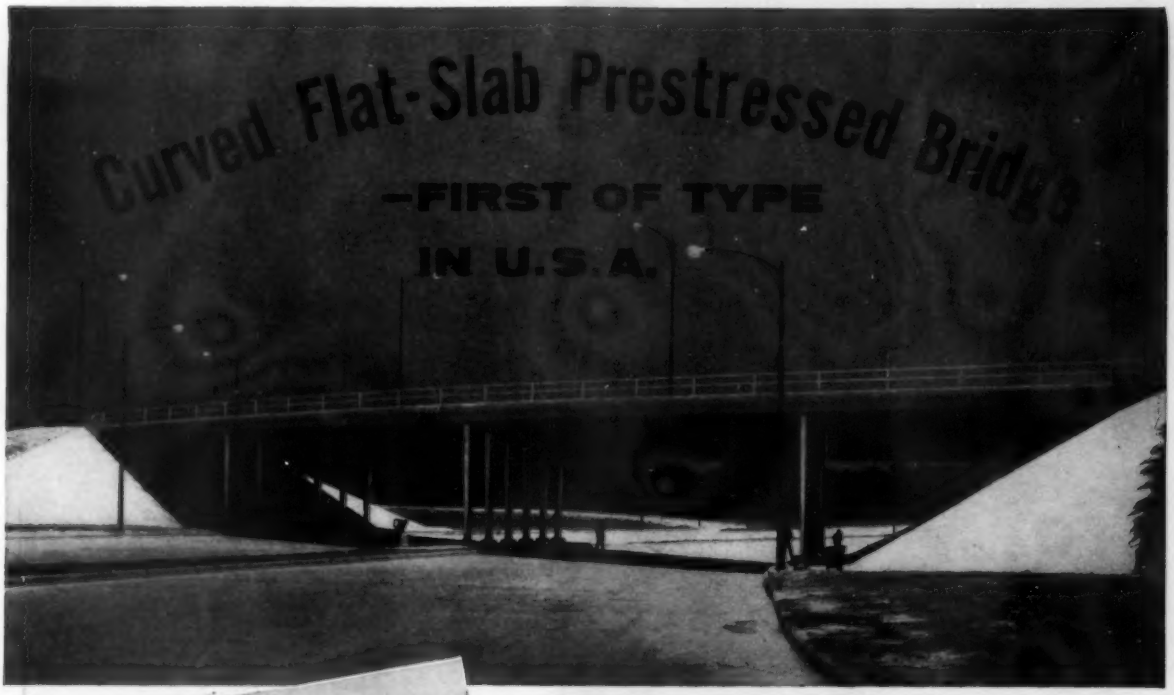
Cable Address: "BERGENCO" (Nutley, N. J.)



● Use of prestressed concrete in bridge construction was extended in several directions in building this attractive bridge in downtown Houston.

The structure is a flat-slab, continuous over three sets of columns. The deck follows both horizontal and vertical curves. Column rows are skewed at different angles with respect to bridge's centerline, which is curved to a radius of 764 ft.

Despite problems created by continuity, curvature and skewed supports, the deck was prestressed with steel tendons continuous over the full 225-ft. length. This steel also undulates in a vertical plane to apply upward and downward forces that counteract bending stresses due to loads on the deck.

The new bridge carries six lanes of traffic on Waugh Drive over an extension of Memorial Drive, which it intersects at a 45 deg. angle. The flat slab deck is 72 ft. wide. Stringent clearance requirements dictated the use of flat-slab design.

The public is pleased with the beauty and utility of this unique bridge. Designer and Contractor are equally pleased with the performance of Lone Star Cement, 12,500 bbls. of which was used in this attractive structure.

WAUGH DRIVE-MEMORIAL DRIVE INTERCHANGE, Houston, Texas

Engineer:
FRANCIS J. NIVEN & ASSOCIATES, Houston

General Contractor:
CONSTRUCTORS, INC., Houston

★

Subcontractor, Prestressing:
TEXAS STRESSED CONCRETE CORPORATION
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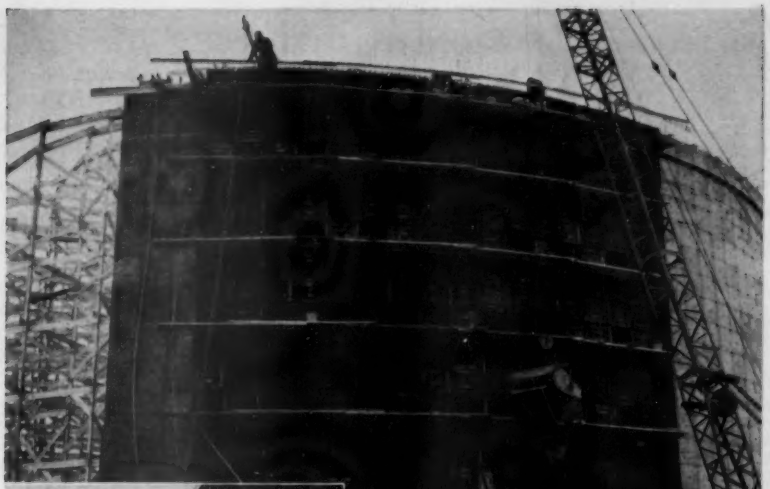
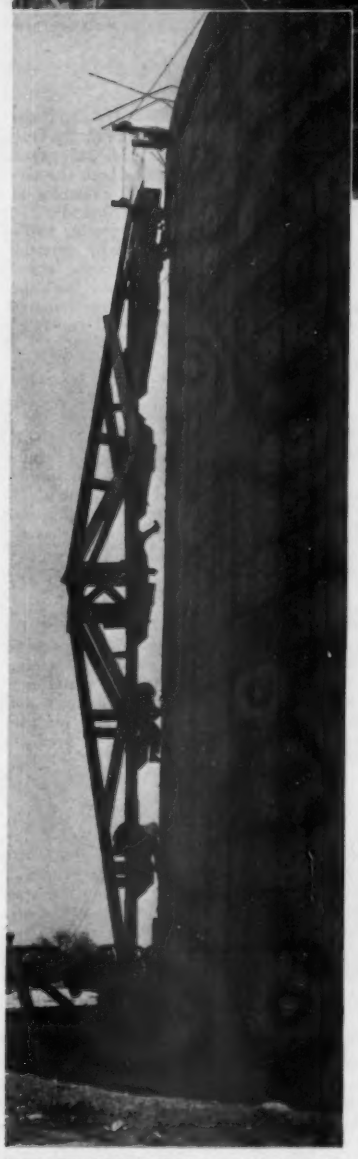




5 MEN ON ROLLING TRUSS removed form ties before prestressing operation.

NO HORIZONTAL JOINTS: 30" sq. steel form pans were set to full height in segments of 1/9 of wall. Omitting pans left pouring windows, easily closed when concrete level reached them. Preload Construction Corp., N. Y., contractor.
Construction Methods Photos

WIRES WOUND 40 STRANDS PER FT. and, at the base, several layers deep, carry 105,000 psi working circumferential stress. Layers were grout bonded and sealed. Previously, vertical prestressing of 140,000 psi was done by wires placed before pouring.

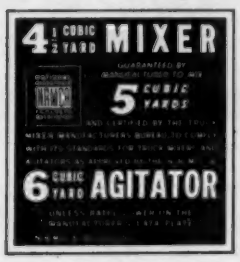
CONTINUOUS POUR of 125' dia. foundations and floors (540 cu. yds. per tank) avoided joints.

17" thin concrete, prestressed both ways,

walls 5 million gallon tanks

TWO TANKS, each 125' in diameter with a liquid depth of 54', were built for Philadelphia Suburban Water Co., North Wayne, Pa., with an estimated saving of 800,000 lbs. of reinforcing steel. With both vertical and circumferential prestressing, instead of heavy reinforced construction, walls are only 17" thick, domed with 2½" thick concrete air-placed around wire mesh.

The workable high strength concrete needed (a mix of 5½" slump developing 5400 psi in 28 days) was processed and delivered on carefully set schedule by truck mixers of certified design, capacity, mixing speed and accuracy of water control.



You have a right to insist on this Rating Plate. It certifies compliance with the high industry standards maintained for your protection by the Truck Mixer Manufacturers Bureau.

BLAW-KNOX CONSTRUCTION EQUIPMENT DIV.
Mattoon, Ill.
CHAIN BELT COMPANY
Milwaukee, Wis.
CHALLENGE MANUFACTURING CO.
Los Angeles, Calif.
CONCRETE TRANSPORT MIXER CO.
St. Louis, Mo.
CONSTRUCTION MACHINERY CO.
Waterloo, Iowa
THE JAEGER MACHINE COMPANY
Columbus, Ohio
THE T. L. SMITH COMPANY
Milwaukee, Wis.
WILLARD CONCRETE MACHINERY CO., LTD.
Lynwood, Calif.
WORTHINGTON CORPORATION
Plainfield, N. J.

Reading for Profit

All of the following books are available from Concrete Publishing Corp., 400 West Madison Street, Chicago 6, Ill. Prices are for cash with order and include postage.

Good Books for Concrete Men

MANUFACTURE OF CONCRETE MASONRY UNITS. By William Grant. Published 1952. 184 pages, 19 chapters, 20 charts, 18 tables. Complete operating manual of up-to-the-minute practice showing how to produce top quality concrete block at the lowest possible cost. Rated by block producers everywhere as the best book on the subject ever published. *PRICE* $4.00

BUILDING ESTIMATOR'S REFERENCE BOOK. By Frank R. Walker. The new Twelfth Edition, revised and rewritten. 1,780 pages containing the latest estimating and cost data on everything that goes into building construction from foundation to the finishing coat of paint. Can be used in any locality, regardless of local prices or wage scales. Included free is the new Vest Pocket Estimator, a separate book of 220 pages of up-to-the-minute estimating and cost data in condensed tabular form. *PRICE* $12.00

DESIGN AND CONSTRUCTION OF FORMWORK FOR CONCRETE STRUCTURES. By A. E. Wynn. Revised 1951. 312 pages, 229 illustrations, 9 folders, 11 design tables. Complete designs for formwork for every type of plain and reinforced concrete structure, from simple footings to arch bridges, with tables from which the sizes and quantities of timber required for any type or size of structure can be seen at a glance. *PRICE* $6.15

CONCRETE CONSTRUCTION MADE EASY. By Leslie Turner and Albert Lakeman. Reprinted 1948. 118 pages, 69 illustrations, 16 tables. A practical book that solves problems in design and erection of any type concrete structure. Full designs with tables and all necessary information for building foundations, walls, columns, floors, roofs, staircases, beams, water tanks, retaining walls, lintels, formwork, saw-tooth roofs, etc. Written clearly and plainly. *PRICE* $2.10

ELEMENTARY GUIDE TO REINFORCED CONCRETE. By Albert Lakeman. Revised 1950. 88 pages, 79 illustrations. Clarifies principles governing design of reinforced concrete for the reader who has no previous knowledge of the subject. Simple explanations are illustrated with clearly drawn diagrams that make the text readily understandable for the beginner. *PRICE* $1.60

REINFORCED CONCRETE DESIGNER'S HANDBOOK. By Chas. E. Reynolds. Revised 1951. 344 pages, 69 tables, 40 illustrations, 106 examples. A standard work of design data for everyday use. Has large, easily read design tables that cover every type of reinforced concrete structure—with fully worked examples, short cuts and simplified methods proved in practice and essential for rapid solutions of problems. *PRICE* $5.20

PRESTRESSED CONCRETE. By Kurt Billig. Published 1953. 470 pages, 119 graphs, tables and drawings, 31 illustrations. The first of three parts deals with general data and fundamentals, the second with the design of prestressed structures, the third with design problems and a number of numerical examples. Each chapter is followed by an extensive bibliography. Included is Dr. Billig's proposed Code of Practice for prestressed concrete. *PRICE* $9.00

PRESTRESSED CONCRETE STRUCTURES. By August E. Komendant. Published 1952. 261 pages, 124 graphs, drawings and tables, 34 illustrations. A comprehensive discussion of prestressed concrete in a brief and simple form for the use of men in the field as well as those engaged in research. Covers general considerations; physical properties of materials; changes of forces and stresses due to plastic flow and shrinkage; and representative prestressed structures. *PRICE* $6.00

PRESTRESSED CONCRETE. By Gustave Magnel. Revised 1954. 345 pages, 328 illustrations. Contains both the theories of prestressing and examples of its use. Chapter subjects include: the principle of prestressed concrete; methods of prestressing; statically determinate beams; continuous beams; tests; creep of steel and concrete; buckling during prestressing; effect on prestress of time and superimposed load; permissible stresses; applications of prestressed concrete; and prestressed precast concrete. *PRICE* $8.00

PRINCIPLES AND PRACTICES OF PRESTRESSED CONCRETE. By P. W. Abeles, D. Sc. (Vienna) and member Institute of Structural Engineers. First American edition, with all notations adapted to the American standard. Textbook of 112 pages which discusses thoroughly the elementary principles of prestressed concrete as well as its applications in practice. *PRICE* $3.75

DESIGN OF PRESTRESSED CONCRETE STRUCTURES. By T. Y. Lin. New 1955. 456 pages. 242 illustrations. Comprehensive coverage of all phases of prestressed concrete structures, emphasizing American methods and conditions. Formulas, tables and graphical methods are so introduced that both preliminary and final designs can be made with ease. Costs of prestressing are also considered and prestressed lift slabs and pretensioning products are described. *PRICE* $11.50

SIMPLIFIED MASONRY PLANNING AND BUILDING. By J. Ralph Dalzell. New 1955. 376 pages. 182 illustrations. Practical, step-by-step guidance for planning and building all common types of concrete, concrete block, stucco and similar masonry structures. Includes basic information on cement, concrete and mortar. *PRICE* $5.00

THE TECHNOLOGY OF CEMENT AND CONCRETE. By Robert F. Blanks and Henry L. Kennedy. New 1955. 422 pages. 155 illustrations, charts, tables and graphs. In logical order and clear, simple language it covers the known facts about the materials used in concrete and their concrete-making qualities. Main emphasis is on portland cement and aggregates, with a special effort to include data on which information is not readily available elsewhere. *PRICE* $11.00

INDUSTRY NEWS

Florida Association Announces Short Courses

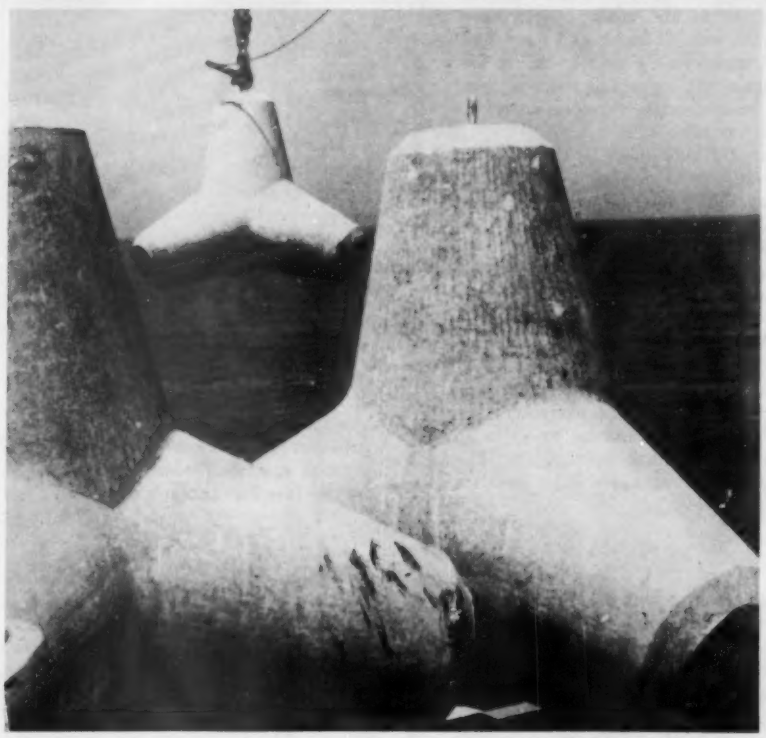
As part of its intensive educational program for management and personnel of block and ready mixed concrete plants, the Florida Concrete and Products Association will hold two sessions in November at Jacksonville, Florida. The first will be on block plant operation and maintenance, and the second will cover fleet and mixer maintenance. Location of the short courses will be announced at a later date. Only member companies will be permitted to send their personnel. Both courses have been specifically designed for the foreman and superintendent, the mechanic and chief mechanic.

The Florida association is also preparing a comprehensive manual on technical aspects of concrete masonry, precast concrete, ready-mixed concrete, and prestressed concrete. It will contain all the information an architect needs to know to work with these materials. The manual will be about 100 pages long and amply illustrated with color photographs.

■

Harry J. Quirk Dies

Harry J. Quirk died May 26th, after 32 years of service to the concrete and allied products industries. He worked as a salesman and pattern maker for many years, and had been associated with the W. E. Dunn Manufacturing Company of Holland, Michigan, since 1948.



Wave Tamers

● These 25-ton concrete castings are called tetrapods. The invention of a Frenchman, they were first used to calm the rough seas off Algeria and Morocco, and are now being installed at Crescent City, California, to protect the breakwater from the ravages of the Pacific. Placed side by side on the ocean floor, their varied surfaces will break the sweep of waves up to 23 feet high. They are being constructed under the supervision of the Army Corps of Engineers. Over 1500 10-foot high tetrapods will be used.

Calendar . . .

OCTOBER 11-12	New York State Concrete Masonry Association—Annual Meeting — Hotel Roosevelt — New York City.
OCTOBER 20	New Jersey State Concrete Products Association — Annual Dinner — Swiss Chalet—Rochelle Park, New Jersey.
OCTOBER 24-25	American Concrete Institute — 9th Annual Regional Meeting — Sheraton-Mount Royal Hotel—Montreal, Canada.
OCTOBER 22-26	National Safety Council —44th National Safety Congress and Exposition —Conrad Hilton, Congress, Morrison, and La Salle Hotels—Chicago, Illinois.
OCTOBER 29-31	American Concrete Pipe Association—6th Annual Short Course School of Instruction—Chase Hotel —St. Louis, Missouri.
NOVEMBER 12-19	American Concrete Pressure Pipe Association — 8th Annual Convention and Meeting — Castle Harbour Hotel — Tucker's Town, Bermuda.
NOVEMBER 14-16	Southeastern Division, National Concrete Masonry Association — 13th Annual Regional Meeting —Hotel Eden Roc—Miami Beach, Florida.
	1957
JAN. 28-FEB. 2	American Road Builders' Association—55th Annual Convention—International Amphitheater — Chicago, Illinois.
FEBRUARY 11-14	National Ready Mixed Concrete Association —27th Annual Meeting—Statler Hotel—Los Angeles, California.
FEBRUARY 25-28	Concrete Industries Exposition—10th Biennial Exposition—Kiel Auditorium—St. Louis, Missouri.
FEBRUARY 25-28	National Concrete Masonry Association—37th Annual Convention—Kiel Auditorium—St. Louis, Missouri.
MARCH 6-9	American Concrete Pipe Association—49th Annual Convention — Shoreham Hotel — Washington, D. C.

Everybody's Business

CONSTRUCTION

- Construction outlays in August were the greatest for any month in history. They leaped to $4.3 billion, up two per cent from July, and one per cent above August 1955. Government figures for the first eight months this year show building expenditures amounting to $28.4 billion — two per cent above last year's level.
- The federal government's tight money policy, while cutting new dwelling unit starts 18 per cent by making mortgage credit difficult to obtain in many areas, has not affected industry activity in general, since the policy apparently does not apply to industrial, commercial and public utility construction. The administration seems to feel that such building is less inflationary than housing, since it enlarges the nation's productive capacity and increases the future supply of goods and services.
- Heavy construction awards have brought the total for the first 37 weeks of 1956 to $15,643,500,000, 16 per cent above the corresponding period in 1955. This year's total to date already tops the 12-months totals for all years except 1955.

MATERIALS

- A southern cement manufacturer has indicated that there may be an oversupply of cement in his section of the country very soon. This can mean increased activity on the part of block and ready-mix manufacturers in the south, who will undoubtedly wish to utilize any excess to multiply their own production and promotion, and may lead to an accelerated building program in the south, brought on by an abundance of materials in an era of prosperity.
- Brick makers believe they are gaining back more of the building dollar. Brick and structural tile production and shipments rose 14 per cent in 1955 — indicating a larger increase than either lumber or cement for that period. Brick makers are boosting capacity faster than sales because they are convinced they can sell the increased output in the years just ahead. This year they have raised capacity at the rate of nearly 1 per cent a month.
- While several major producers of cement are raising or thinking of raising their per-barrel prices, Allis-Chalmers in Milwaukee has developed a manufacturing process that promises to cut the cost of producing cement and to make it possible to manufacture cement in urban areas. Advantages of the process are said to be extremely low dust — less than 1 per cent — fuel savings that amount to 10 to 20 cents a barrel, and factory space savings of up to 40 per cent. The process has been tested in a company pilot plant and will be installed soon by a Milwaukee cement firm.

TAXES

- The Small Business Administration has set up a group to study ways to simplify the payment of taxes by small businesses, and is also working on more lenient rules to define firms small enough to qualify for special government contracts. SBA will count assets and sales as well as the number of employees in modifying the regulations.
- Refunds of the 1 cent per gallon federal gasoline tax may be obtained from the government for gasoline used in mixer motors on ready-mixed-concrete trucks if the drum is revolved by a separate motor. This is in accord with the government intent to tax only gasoline used as fuel in highway vehicles.
- The Bureau of the Budget has issued a policy directive to federal agencies requesting a reduction of records they require business firms to keep. Potential savings to business have been estimated at $25 million to $40 million a year.

BOOK REVIEWS

ADMIXTURES FOR CONCRETE. *Reported by ACI Committee* 212, *American Concrete Institute*, 18263 *W. McNichols Road, Detroit* 19, *Michigan*, 75 *cents.*

With the aim of providing a perspective of the field of admixtures for the engineer confronted with a need of modifying concrete to meet special requirements of a given job, admixtures are classified into 11 groups. The 11 groups are: (1) accelerators, (2) retarders, (3) air-entraining agents, (4) gas-forming agents, (5) cementitious materials, (6) pozzolans, (7) alkali-aggregate expansion inhibitors, (8) dampproofing and permeability reducing agents, (9) workability agents, (10) grouting agents, and (11) miscellaneous. Discussions are given of the factors which might indicate the usefulness of admixtures of each group, and of the important effects which may ordinarily be expected from the use of materials of each group.

SUPERVISORS SAFETY MANUAL. *National Safety Council*, 425 *North Michigan Avenue, Chicago* 11, *Illinois*, 354 *pages*, $6.50.

This book contains facts, ideas and suggestions for top-notch safety supervision which are aimed squarely at giving foremen a basic, usable knowledge of accident prevention techniques and human relations know-how. Used as a text for group training or self study, the Supervisors Manual will help the foreman gain an understanding of accident problems, and will show him how to achieve a standout safety record. Used as a reference work, the manual provides a solution to most of the general safety problems encountered by the foreman in each work day.

FOUNDATION ENGINEERING. *By Rolt Hammond, A.C.G.I., A.M.I.C.E., Philosophical Library, Inc.*, 15 *E. 40th Street, New York, New York*, $10.00.

About forty photographs are used in this work to show actual constructions and the problems they presented, and the author has prepared nearly sixty special line-drawings to illustrate and amplify his explanations and descriptions. Each chapter is followed by a list of references to papers and books from which more detailed information can be obtained if required.

it's a concrete fact!

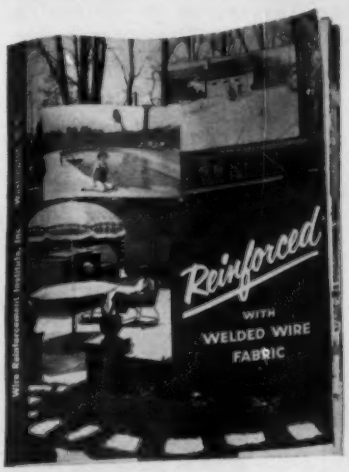
WIRE FABRIC REINFORCING RETARDS SLAB CRACKING

Concrete has a strong compressive strength, but a weak tensile strength. Reinforcing with welded wire fabric provides the strength needed to overcome such deteriorating effects as shrinkage stresses during setting, varying temperatures and moisture, and heavy loads. If cracks should develop, welded wire fabric holds the concrete together . . . keeps cracks small and barely perceptible . . . prevents moisture and soil from entering and enlarging cracks. Reinforcing with welded wire fabric gives you concrete with minimum slab cracking—concrete that's durable, structurally stable, and endowed with an extended life.

FREE

16-PAGE BOOKLET

Get the complete story. Contact our nearest district sales office and ask for Wire Reinforcement Institute publication HT-60, "Reinforced With Welded Wire Fabric." And don't hesitate to tell us about your reinforcing problems. We will be glad to help you select the right reinforcing for your jobs. Of course, Clinton Welded Wire Fabric is made to A.S.T.M. specifications in a variety of gauges and spacing.



WHEN THEY ASK...

"is it Reinforced"

SAY YES... WITH

CLINTON CF&I
WELDED WIRE FABRIC
THE COLORADO FUEL AND IRON CORPORATION

4293

THE COLORADO FUEL AND IRON CORPORATION: Albuquerque • Amarillo • Billings • Boise • Butte • Casper • Denver • El Paso • Ft. Worth • Houston Kansas City • Lincoln (Neb.) • Oklahoma City • Phoenix • Pueblo • Salt Lake City • Wichita
PACIFIC COAST DIVISION: Los Angeles • Oakland • Portland • San Francisco • Seattle • Spokane
WICKWIRE SPENCER STEEL DIVISION: Atlanta • Boston • Buffalo • Chicago • Detroit • New Orleans • New York • Philadelphia
CF&I OFFICES IN CANADA: Toronto • Montreal **CANADIAN REPRESENTATIVES AT:** Calgary • Edmonton • Vancouver • Winnipeg

Brick Makes Comeback

First all-inclusive survey shows industry's production increased 14 per cent last year

The brick and structural tile industry last year increased its production 14 per cent, according to an announcement by Dr. Robinson Newcomb, market analyst for the Structural Clay Products Institute. This is the greatest increase of any major structural building material during 1955, according to Mr. Newcomb. The fact is of interest to block producers because they compete for identical markets.

Quoting from a survey of production and capacity made by Robinson Newcomb Associates, the first all-inclusive one in the industry's history, he disclosed that the brick and tile makers produced 9 billion brick equivalents in 1955—a post-war high.

Comparing the brick and tile production increase of 14 per cent in 1955 with competitive materials, Mr. Newcomb indicated that it was greater than lumber with a 4.7 per cent increase and cement with a 9.4 per cent rise.

Turning to the capacity of the industry, the report states that the structural clay products industry has expanded more in proportion in the last two years than did the producers of any other major building material. For example, in 1955 cement capacity increased 7.4 per cent, steel rose 2.1 per cent, while brick capacity went up 9.9 per cent.

The report emphasizes that, on the basis of this new survey, previous conceptions of the industry's relative position in the building materials field must be changed. With brick and tile proportionally leading in plant expansion, it must now, according to Mr. Newcomb, be regarded as one of the pace-setters on the construction scene.

According to the Newcomb study, capacity of the clay products industry is being increased at the rate of over 1 per cent a month by the addition of new facilities and the improvement of existing facilities. All over the United States, the survey reveals, new, modern brick and tile plants are being built and owners of older ones are learning how to make better use of their facilities for higher production.

A review of the past 30 years in the brick and tile industry shows a fluctuating market, the Newcomb report states. From a peak of 13.9 billion brick equivalents in 1925, the industry showed a steady decline in production through the depression and World War II. Then, starting with the post-war years, production started a steady climb which is still continuing. In 1953 production reached 7.6 billion brick equivalents. In 1954 there was an increase of 5 per cent and in 1955 production again increased by 14 per cent over 1954.

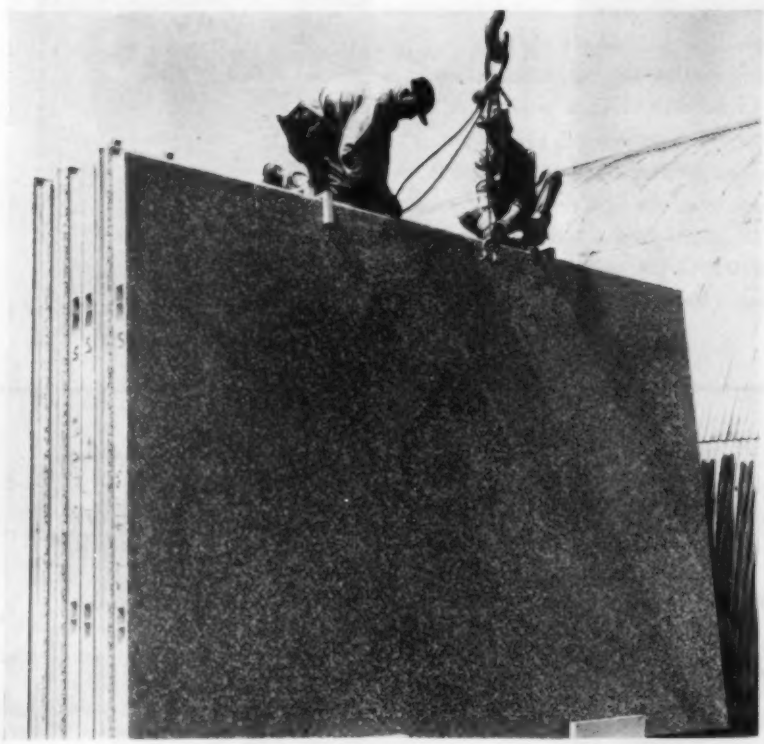
■

ACI Holds First Canadian Regional

The ninth regional meeting of the American Concrete Institute will be held at the Sheraton-Mt. Royal Hotel, Montreal, Canada, October 23 to 25. The first such gathering to be held north of the border, this affair will focus attention on problems of particular interest to concrete men in the northeastern states and eastern Canada. Inspection trips will be made to construction sites on the St. Lawrence Seaway.

■

Army Gets Precast Panels



● These panels are marked for what will be the world's largest building constructed of architecturally faced precast insulated concrete wall panels. To be completed in 1957, the building will be part of the military plant at Fort Meade, Maryland. The panels are faced with green stone, and will support their own weight and the weight of a window as well. The Marietta Concrete Corp. of Marietta, Ohio is furnishing the panels from their branch plant at Baltimore. For other news of Marietta, turn to the article which begins on page 30 of this issue.

Cement Imports Backfire

38 per cent increase in first half proves too much as domestic output jumps

Although cement imports for the first half of this year were 38 per cent above the first six months of 1955, importers are expressing fear that expansion and building of new plants here may cause a drop in the import trend. The weather-caused late beginning of the American construction season and several strikes in the steel and shipping industries made it necessary for West European producers to lower their prices in June, after many distributors had switched to more reasonably priced cement from Israel, Yugoslavia, and Denmark.

Most of the cement went to coastal areas, always big importers, and some went to relieve the shortages in the Great Lakes region earlier this season. While West Germany and Belgium-Luxembourg are still the heaviest suppliers, much is being shipped from Sweden and Denmark. Yugoslavia has increased its exports to this country, and Israel, which began sending out cement only last year, has almost quadrupled the amount it is exporting to the United States. Poland is trying to come into our market, but has not as yet succeeded. Some sources feel that Polish cement may not meet ASTM standards.

January through June imports amounted to 1,837,968 barrels worth $5,936,004, compared to last year's figures of 1,333,606 barrels worth $3,604,509 for the same period. Altogether, imports last year accounted for only 1 per cent of domestic consumption.

NCSA Names New Engineering Director

The National Crushed Stone Association, which has its headquarters in Washington, D. C., has promoted Joseph E. Gray to the position of engineering director. A. T. Goldbeck, who served in that capacity for many years, and who is widely known throughout the concrete field, will continue to serve the association as a consultant on technical matters. Mr. Gray was formerly field engineer.

■

ACI Journal Ups Frequency of Issue

The frequency of issue of the *Journal* of the American Concrete Institute has been changed from 10 to 12 times per year. The change, which is the first since the present schedule was adopted in 1946, took effect with the publication of a July issue this year.

The editors point out that in the 27 years of publication of the modern ACI *Journal* through June 1956, 1079 papers, reports, and standards have been made available to engineers and concrete technicians. From a historical standpoint the present *Journal* is actually the second such publication. From 1913 to 1915 an earlier version was published in three volumes totaling 18 issues. Following a lapse of 14 years, publication was resumed in 1929 under the editorship of Harvey Whipple, who was at one time editor of CONCRETE magazine.

■

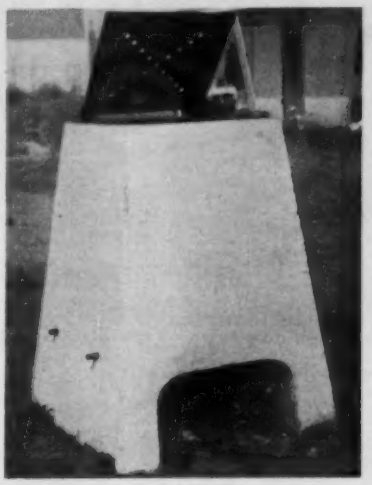
ASTM Publishes 1955 Proceedings

The 1955 edition of the *ASTM Proceedings* has just come out. The 1264-page volume records the technical accomplishments of the American Society for Testing Materials for the year, and includes many technical reports and papers. In addition to these, the *Proceedings* contains much discussion that has not been previously published. Copies may be purchased from American Society for Testing Materials, 1916 Race Street, Philadelphia 3, Pennsylvania. The price is $12.00 per copy.

Nebraska Firm Perfects Concrete Incinerator

When the Pace Tyerman Company, Imperial, Nebraska, began manufacturing a heat resistant concrete incinerator it found a ready market for the unit. One important reason for this is that the company offers a quality product which is useful, attractive and economical.

A local advertising campaign was carried on to acquaint the public with the unit. Called a Pyramid incinerator, it measures 24 inches at the base, 16 inches square at the top and 32 inches in height. At present this is the only size available, but the company hopes to start producing a larger unit soon.



● The mix for this concrete incinerator consists of 4 parts gravel and perlite to 1 part portland cement.

The forms are made of plywood and spaced to give 3 inches of thickness to the walls of the incinerator. The mix is 4 parts gravel and perlite to 1 part regular portland cement. About one third of the aggregate consists of perlite to protect the units from thermal shock.

Originally the units were manufactured in eight colors. However, in order to speed up production, the company has decided to cut the number to three; bough green, white and another, to be chosen according to sales appeal.

Since the units weigh 425 pounds each, it is impractical to ship them any great distance. In an effort to increase the market, the company has made plans to move its equipment from town to town by truck and set up operations until the demand at each location is exhausted.

Besser 8-Star Promotion of CONCRETE BLOCK

- Concrete Masonry Advertisements in Architectural and Building Publications.
- 28 Page Concrete Masonry Insert in Sweet's Architectural File.
- Permanent Exhibit in National Housing Center, Washington, D. C.
- Permanent Exhibit in Architects' Samples Corporation Building, New York City.
- Exhibit Display Units for Home Shows, Conventions, etc., loaned to block plants.
- Plan Books illustrating 225 Block Masonry Homes.
- Series of 26 Newspaper Ads to help Sell Concrete Masonry to the big Home Market.
- Cooperative Advertising Material, including Home Builders' Booklet . . . Jumbo post cards in full color . . . Blotters . . . Match Books . . . Bulletins . . . Radio scripts . . . Movie films . . . etc.

Creates Interest in Concrete Masonry... Stimulates Demand for All Types of Block ...Helps Plants to Sell More Units

You not only want to *produce* block...you want to *sell* block. The Besser Company helps you to do BOTH!

Through the medium of architectural and building publications, radio, newspapers, exhibits and a great variety of promotional material, the Besser Company is carrying the torch for the Block Industry. We are sincerely striving to get Mr. Public sold on the merits of Concrete Masonry.

Besser provides the world's leading machine for making block, plus the necessary "tools" for selling the block. This twofold program results in a solid foundation for progress for all VIBRAPAC Block Plants.

A portion of the Besser Company's permanent exhibit at the National Housing Center, Washington, D. C. Shows many new and interesting concrete masonry wall patterns.

Besser Exhibit at the Architects' Samples Corporation, New York City. Presented to the Architectural Profession by the Besser Company to suggest design in concrete masonry.

A 8927-1PBC

BESSER COMPANY

World's Leading Manufacturer of Concrete Block Machinery

ALPENA, MICHIGAN, U. S. A.

Sales Conference

National Concrete Masonry Association holds first in a series of regional merchandising sessions

The first of a series of sales and merchandising conferences was staged by the National Concrete Masonry Association at the Hotel Sherman in Chicago on September 13. More than a hundred sales and management personnel of member companies who took part in the affair pronounced it an outstanding success, and voiced the hope that perhaps more time could be devoted to similar sessions in the future.

The meeting was planned and conducted under the chairmanship of William P. Markert, director of promotion for NCMA. Guest speakers included Fred A. Palmer, sales consultant, of Columbus, Ohio, James Cleary of Roche, Williams & Cleary, Inc., Chicago, John Walker of the same organization, Stanley J. Fairweather, General Exhibits & Displays, Inc., Chicago, and Richard Knox, Portland Cement Association.

Probably the most successful and informative elements of the program were two well planned panel discussions—one on selling to the architect and the other on selling to the contractor or builder. Panel members included architects, mason contractors, general contractors, and sales representatives of block producing companies.

Following are some of the thought provoking statements on salesmen and salesmanship made during the meeting:

Prior to 1940, 75 per cent of all salesmen were on commission. Today 75 per cent are on straight salaries, with a corresponding loss of incentive.

Genuinely enthusiastic selling is only possible when the top man in an organization takes an interest in selling.

The general pattern of American business is to spend too little on sales effort. Too many companies that need 4 salesman have only 1½.

If an employee can really sell, it is a serious mistake to require him to do anything else.

The most prevalent failure in the whole field of selling is in the most important part of the job — closing the sale. Vast numbers of salesman never quite get around to asking for the order.

Plans have already been made to hold similar sales and merchandising conferences in other sections of the country. One has been scheduled to be held at the Hotel Eden Rock, Miami Beach, November 13, just a day before the 13 annual regional meeting of the Southeastern Division of NCMA at the same place. A third session is being planned for New York city immediately following the Miami Beach meeting.

Home Improvement Group To Continue Operations

Sponsored by the U. S. Chamber of Commerce, encouraged by the government's housing administration, and applauded by the home improvement industry, Operation Home Improvement has decided to continue its campaign into 1957. The result of a government appeal to private industry to launch a concerted effort to renew the nation's old but still sound houses, the group was able to report a considerable amount of success in its drive to awaken public interest in home betterment.

Primary effort in the coming months will be directed toward the community. To this end a new promotion kit is being prepared by the staff, which will include a community handbook and promotion material.

■

Home Builders Plan Ahead

The National Association of Home Builders has announced that its 13th annual convention and exposition will be held in Chicago, January 20-24. The program will include sessions of special interest to the small volume builder as well as meetings planned for larger firms and for the industry as a whole.

CEMENT BRIEFS

Increased Capacity

Ideal Cement Company is planning to expand its operations at Okay, Arkansas, in order to better serve the Arkansas and Northern Louisiana area. The expansion program will cost about $2 million, and will increase plant production 25 per cent to 2 million barrels.

Riverside Cement Company is planning a 50 per cent expansion of its finish cement producing facilities at Oro Grande, California. Completion of the $3,500,000 project is scheduled for July, 1957.

Canada Cement Company, largest cement manufacturer in Canada, is planning to expand its Havelock, New Brunswick, subsidiary by adding another kiln. In addition, the firm's new Beachville, Ontario, plant is scheduled to start production late this month and another expansion program is under way at the Fort Whyte plant. By the end of this year the company will attain a production capacity of about 24 million barrels.

Peerless Cement Corporation, starting production at a new $7,000,000 plant in Detroit, plans to produce at least an additional 1,250,000 barrels of cement a year to help relieve the Michigan cement shortage.

New Plants

Florida Portland Cement Division of the General Portland Cement Company will open another plant late next year in Dade County, Florida. The new plant will produce 2,500,000 barrels annually.

Universal Atlas Cement Company is constructing another cement plant at Buffington, Indiana. It is expected to produce more than 3 million barrels annually, supplementing the older plant's seven million barrel capacity.

■

Firm Celebrates 30th Year

Concrete Incorporated of St. Louis began its 30th year in the ready-mix concrete business in August. The company was founded in 1926. R. T. Powell, president of the firm, pledged a rededication of efforts to maintain the same high standard of operation for the future.

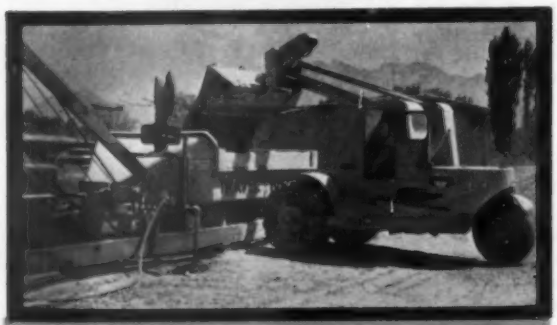
EXTEND YOUR OPERATING TERRITORY

MOVE EASILY FROM JOB TO JOB

WITH THE VERSATILE, PORTABLE

TRAVEL BATCHER

TRADEMARK



Travel-Batcher is shown here being recharged with a front-end loader, using materials stockpiled at job-site. Dump trucks can also be used, hauling materials from plant.

This revolutionary concrete batcher gives you a portable ready-mix plant right at the job-site . . . anywhere the highways will take you. You can take jobs that would ordinarily be far out of reach. The Travel-Batcher makes one mixer truck at job-site do the work of six trucks running to and from the plant . . . and gives you a continuous supply of quality-controlled concrete exactly when and where you need it. Production up to 100 yards per hour.

TRAVEL-BATCHER WIDELY USED

Travel-Batchers are being used by some of the largest contractors and ready-mix operators in the country, as shown on map at right.

HERE ARE COMMENTS OF TWO TYPICAL USERS:

We do not have to run our mixers eight miles each way to load them. It's the best piece of equipment we ever bought.
J. and M. Concrete Products
Garden City, Long Island, New York

We can now figure a job anywhere, disregarding distance. We estimate cost saving in handling jobs of about 40%.
Gallup Sand and Gravel Co.
Gallup, New Mexico

For additional information about the time-saving, cost-saving Travel-Batcher, phone, wire or write . . .

TRAVEL BATCHER CORP.

6450 Holladay Blvd. Salt Lake City, Utah

Travel-Batcher can be set up ready for batching in less than 10 minutes; several jobs can be handled in one day.

NOT IN THE SPECS

Break Break

With the possible exception of automation, the coffee-break seems likely to go down in history as our generation's most significant contribution to the business scene. While we're not fully convinced that the coffee break is quite as serious a problem as some business men would have us believe, it has certainly captured a place in the limelight. According to the *Wall Street Journal*, one firm recently went to the mat with the problem by sending the following letter to all of its employees:

Due to increased competition and a keen desire to remain in business, we find it necessary to institute a new policy—effective immediately. We are asking that somewhere between starting and quitting time and without infringing too much on the time usually devoted to lunch period, coffee breaks, rest period, story telling, ticket selling, parley cards and baseball pools, vacationing and rehashing yesterday's TV programs—each employee find some time which can be set aside as the Work Break. To some this may seem a radical innovation, but we honestly believe this idea has great possibilities. It can conceivably be an aid to steady employment and it might also be a means of assuring pay checks. While the adoption of the Work Break plan is not compulsory, it is hoped that each employee will take time to give it a fair trial.

It's Free, Anyhow

"Maybe," says a house ad in a recent issue of a contemporary publication, "you haven't thought of our magazine as a tool. Still, that's exactly what it is — a tool that can help you run your business more efficiently and more profitably. What's

more, it doesn't cost you a cent to subscribe. We'll send you our magazine free each month if (1) you are a *bona fide* producer of concrete masonry units and/or ready-mix concrete, and (2) if you let us know exactly what these products are."

Maybe we're expecting too much, but wouldn't that little old tool be a bit sharper if the people turning it out had at least a general notion as to what block and ready-mixed concrete are?

Hair Splitter

A building expert for the Atomic Energy Commission testified the other day before a House Civil Defense Sub-Committee that it is possible to build a bomb-proof shelter of concrete, but he expressed the belief that the people inside would probably not survive. This strikes us as being a somewhat frivolous technicality, although it is conceivable that it would make some difference to the occupants.

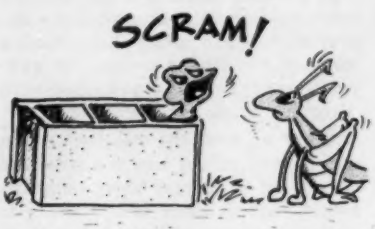
It reminds us of an explanation of the term expert we heard not long ago. It was pointed out that an ex is a "has been" and a spurt is a "drip under pressure".

The Inevitable Toad

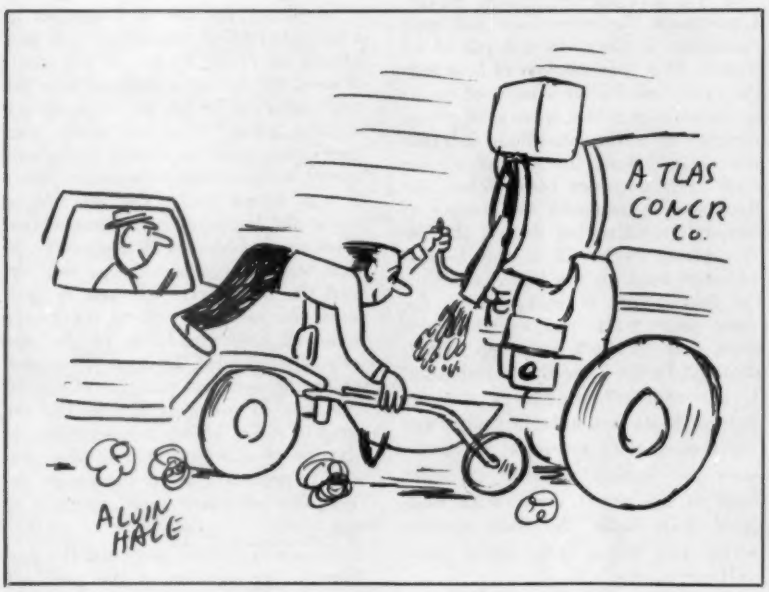
A newspaper clipping we've just received from Okarche, Oklahoma, states that a wrecking crew in that city was surprised when it broke open a block of concrete from a bank erected in 1907 and out hopped a toad. What would really surprise and delight us, would be a report of this kind, with a new twist. It would read something like this:

"When a wrecking crew here broke open a block of concrete from a bank building erected in 1907, they waited confidently for the inevitable live toad to come hopping out. They found the toad all right, but to their utter astonishment he was deader than a mackerel!"

The Okarche story *has* a slightly new twist come to think of it. This particular toad, after hopping brisk-



ly from the tomb he had occupied for 49 years, departed from the script by toppling over dead when he was offered a juicy bug. The only possible point we can see to introducing this particular climax is that it might enable the WCTU to draw a useful moral on the evils of bug juice.



The Case for Insulated Kilns

A down-to-earth discussion of kiln construction from the standpoint of both steam economy and quality of end product

By WILLIAM J. SHORE
Curing Consultant

MANY CONCRETE BLOCK curing kilns use 2½ times as much steam as is actually required. The writer has found this to be true in many of the plants he has visited during the past five years. The fact is that when a block curing kiln is properly designed and insulated against loss of heat, steam consumption for equivalent curing effect is about 40 per cent of the amount required in ordinary curing kilns. Or, to put it another way, for every 100 pounds of steam demanded for block curing in well designed insulating kilns, the ordinary, everyday standard block curing kiln requires 250 pounds of steam.

Since 1947 the writer has specialized in the installation of block curing systems employing both low and high pressure steam. For an engineer there is always the urge to make improvements, and along these lines, a study of the curing process, its purposes and prevailing practices were of course prime considerations.

What we term the standard everyday type of curing kiln is a structure consisting of four or more compartments, with concrete floor slabs, side walls of concrete block and roof of concrete planks or reinforced concrete poured over wood forms. Usually they are structures distinguished for massiveness. Freshly made concrete block on racks are loaded into these compartments, the doors shut and steam admitted. After a time the steam is shut off and the block are left to soak in an atmosphere of steam, vapor and heat.

The construction of these ordinary kilns is in complete violation of every sound principle of heat conduction, heat storage and heat transmission through walls. To correct these faults, the writer at every opportunity worked out a series of designs that would eliminate the faults so common in all ordinary kilns. These various new features in kiln design are listed herewith.

1. SIDE AND REAR WALLS. Instead of using ordinary heavyweight block, only the very lightest lightweight units are used. These may consist of cinder aggregate, or of manufactured lightweight material such as expanded clay, shale or slag.

2. INSULATION OF SIDE WALL BLOCK. All openings in wall block are filled hand tight with insulating material. This serves several purposes. It prevents transmission of heat from the interior wall of the block through air convection currents to the outer wall of the block. Heat from the steam is applied only to the one wall of the block instead of both walls and ribs. Thus less heat is required to bring the interior walls up to temperature required. Also less heat is transmitted through the walls to the outside. Every block maker has found out how difficult it is to obtain good curing of block that are loaded into kilns which have exterior walls.

3. INSULATION OF FLOOR SLABS. Underneath the entire floor slab area insulation is placed to a depth of 12 inches. This prevents loss of heat into the earth below. But what is of greater importance is that when heat passes through an uninsulated floor slab into the earth below, the surface of the floor slab becomes cool. When the floor slab is insulated, the surface of the slab remains hot during the entire curing cycle. All of this heat is radiated back to the block and thus the lower tiers of racks obtain the same amount of heat as the upper tiers, and all block from top to bottom will be the same shade and color. Under ordinary conditions, the top tiers of block are light in shade, and the bottom tiers are dark, the lower tiers not having received as much heat as the upper ones. With insulated floor slabs, the floor remains warm and helps bring about more uniform curing.

4. INSULATED ROOF COVERING. Two faults are common in many curing kilns. If the roof is too thin, as for example with concrete channel planks, the heat loss to the outside atmosphere is so great that it is difficult to maintain high temperature in the kiln. If the roof is too thick and heavy, as, for example a reinforced roof of 8-inch thick concrete, it is practically impossible to raise kiln temperature because of the heat absorbed by the roof. To obtain a light-weight roof structure and a high degree of insulation, there has been developed a special design of concrete roof plank which has a central core of insulation. The 1½-inch thick concrete on the inside surface of such planks requires little heat to bring up temperature, and the central core of insulation allows very little of this heat to escape to the outside.

In tests of fuel consumption the author has found that for ordinary uninsulated kilns, fuel consumption per 1000 8-inch units runs about 20 gallons. A comparable figure for insulated kilns is about 8 gallons. Converting gallons of fuel oil into pounds of steam delivered we find that for ordinary uninsulated kilns around 2 pounds of steam is required to cure one 8-inch block. For insulated kilns about 0.80 pounds is required. These figures are based on actual experience in the field.

In theory the use of insulation in kiln construction should effect a fuel saving of from 10 to 15 per cent. Where, the author wondered, was the additional 45 to 50 per cent saving coming from? Careful study and check was made on curing operations at every opportunity. In many plants it was found to be the practice to bring the temperature of uninsulated kilns up to 165 or 175 degrees F. At that temperature steam was shut off and the block were allowed to soak until the next day, when they were removed from the kilns. In the case of insulated kilns, however, it seemed to be the common practice to cut off the flow of steam at 135 to 145 degrees F. The higher temperatures in the case of uninsulated kilns were generally necessary as a means of developing adequate early strength of the block.

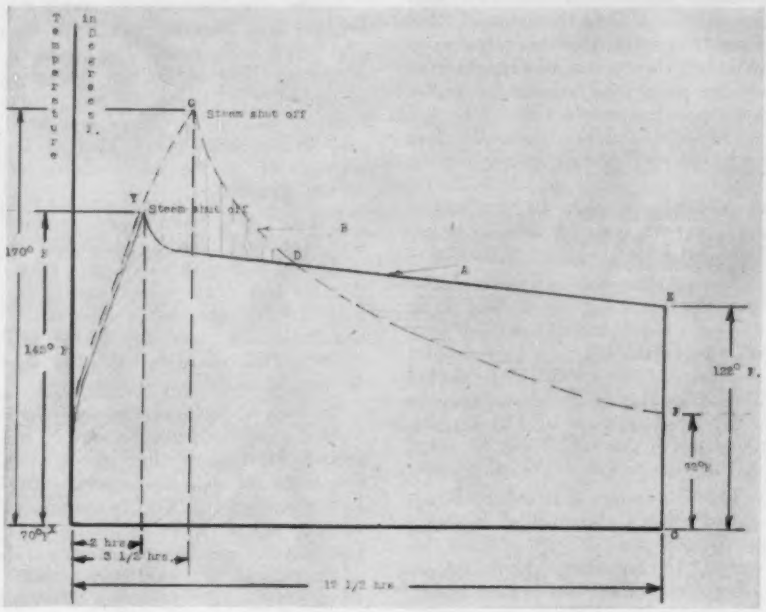
This observation provided the first clue to the solution of the problem.

The complete demonstration and proof of the matter was obtained through study of temperature recordings of an initial trial curing run in a newly installed set of insulated kilns. Every new installation of a curing assembly made by the writer is subject to a concluding temperature chart recording. The curve produced shows the rate at which temperature rises and the rate at which it falls. Knowing the rate of steam delivery, this chart is a rough indication of the efficiency and effectiveness of the installation.

The circular chart shown indicates a temperature recording over a period of 46 hours in one of the kilns installed for the Willcutt Building and Materials Company in Tuscaloosa, Alabama, made in August 1955. A delay in obtaining gas service prevented operation of the steam equipment. It was therefore decided to load one kiln with block and obtain a record of temperature changes in the kiln with no steam delivered. The kiln contained 1440 standard 8-inch units and the temperature was taken at a point two feet from the rear of the kiln, exactly in the center and about two feet from the ceiling.

Beginning at 10 AM the chart shows that initial temperature was 75 degrees F. For the next 12 hours the temperature rises slowly, reaching 105 degrees F. at about 10 PM. From there it remains steady for another 10 hours and then begins to drop, falling to 100 degrees at noon the following day. This indicated a drop of 5 degrees over a period of 16 hours, or a drop of about 1/3 of a degree per hour. The temperature rise was due to the heat of hydration of the cement in the block. At the beginning the rate of hydration was such that it caused a temperature rise from 75 to 105. When it reached 105, the rate of heat generation slowed down somewhat, roughly balancing the heat loss, and thus the temperature remained constant for a time. Later on, with a further slowing up of hydration, the temperature started to fall, but very slowly.

At 12:10 the next day gas was available and steam was turned on. The temperature in the kiln was 100 degrees and started moving higher



● The circular chart (A) directly below shows the excellent temperature maintenance possible in an insulated kiln, while the circular chart (B) at the right shows the rapid temperature drop which is typical of uninsulated kilns. The two chart records are also shown in the rectilinear graph at the right, in which the solid line represents the performance of the insulated kiln, and the dotted line the performance of the uninsulated kiln.

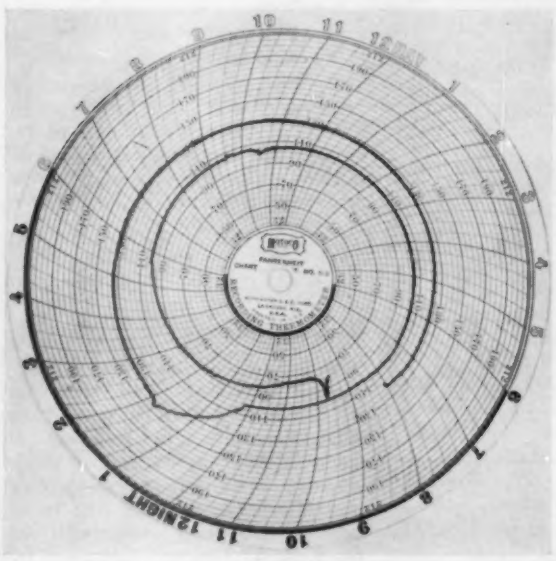


CHART A

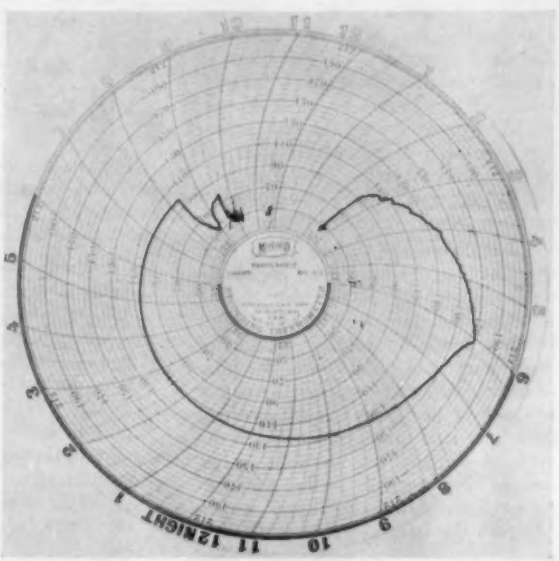


CHART B

at once. Under ordinary conditions the heat of hydration of freshly made block would cause the temperature to jump 30 degrees within ten minutes or so, so that under these circumstances, conditions were similar to normal operation and practice. At 1:45 steam was turned off and kiln temperature showed at its true value of 140 degrees F. From 2 o'clock in the afternoon till 8 AM the following day the temperature dropped to 120 degrees F., a total fall of 20 degrees over a period of 18 hours or 1.11 degrees F. drop per hour. This is a remarkably fine example of heat retention and proves beyond any doubt the benefit that may be derived through the use of insulated kiln construction. The readings of this circular chart have been transferred to the regular type of rectilinear cross section paper and are shown in the accompanying graph.

Uninsulated kilns generally lose temperature at the rate of 5 degrees F. per hour. This figure is based upon readings taken by the author over several years on ordinary uninsulated kilns.

Since the rate of temperature drop in ordinary kilns is higher, it is necessary to bring the initial temperature of the kiln to a higher point as shown in the graph by the dotted line. After 3.5 hours of steaming to reach a temperature of 170 degrees, the steam is shut off. It will be noted that the temperature falls off rapidly.

The two factors that influence curing effect are duration of heat applied, and the degree of heat involved. Curing effect might be defined as the amount of cement hydration that takes place. Fresh concrete subjected to a heat of 90 degrees for a period of one hour has achieved the same amount of curing effect as when exposed to 45 degrees for two hours, or 30 degrees for three hours, or 15 degrees for six hours. Therefore, the area of the graph bounded by the curve over the period of curing time and upper temperature curve represents curing effect.

Since in an uninsulated kiln it is necessary to bring initial temperatures up as high as 170 degrees F., as shown in the curve, curing effect is greater during the first portion of the curing cycle, but since the temperature falls off rapidly (roughly 5 degrees per hour) curing effect over the last three quarters of the cycle is actually less than in an insulated kiln. Actually in the comparative curves shown, the total curing effect in the insulated kiln is slightly greater than in the uninsulated kiln.

Steam for the insulated kiln flows in at the rate of 550 pounds per hour and is on for two hours, making total steam input 1100 pounds. Steam for the uninsulated kiln flows in at the rate of 825 pounds per hour and is left on 3.5 hours making a total input of 2880 pounds. (Rate of steam flow must be greater for the uninsulated kiln, otherwise it would require a much longer time to reach 170 degrees.)

Circular chart "A" shows high temperature maintenance achieved in the insulated kiln, while chart "B" shows the rapid drop in temperature because of lack of insulation in the kiln. Both charts are field records on actual kilns in operation.

Steam economies are not achieved because less heat escapes from the kiln which is insulated. The economy is mainly because the interior kiln temperature is maintained practically constant and this continued high heat adds to the curing effect. This can be seen plainly in the linear curves set up for comparison.

For a 6,000 block daily production, insulated kilns run about $1,000 to $2,000 higher than ordinary kilns. Because less steam is required in insulated kilns, the cost of the boiler installation is less by $1,000 to $2,000. Thus there is but little difference in initial investment costs.

Records of fuel consumption taken from six separate installations of insulated kilns show that it required 8 gallons of oil to properly cure 1,000 8-inch units. Fuel consumption records of 12 ordinary uninsulated kiln installations show a fuel demand of 20 gallons per 1000 8-inch units. As further confirmation of this last figure, data on fuel requirements for curing throughout the block industry show that well operated plants report a fuel cost of $2.00 to $2.50 per 1000 8-inch units, with oil costs varying from 8 to 12 cents per gallon.

With oil costing 13 cents per gallon, a block plant making 6,000 units per day, or, 1,500,000 per year, will show these annual fuel costs:

For ordinary uninsulated kilns, 20 gallons/1000, 30,000 gallons per year	$ 3,900
For insulated curing kilns, 8 gallons/1000, 12,000 gallons per year	$ 1,560
Saving in fuel costs per annum through use of insulated kilns	$ 2,340
Fuel saving over a period of ten years	$23,400

This is a worthwhile saving, especially since it is achieved without any extra initial capital investment. Many block plants in operation today show annual fuel costs as high as $7500 for curing 1,500,000 units.

The concrete block industry is highly efficient. Proof of this is to be found in the fact that despite the doubling of labor and material costs, block are selling for about the same price as twenty years ago. But curing operations and performance are also in far too many plants about the same as they were twenty years ago. There seem to be two reasons for this: First, many block makers believe that they have been endowed with special talent for designing curing kilns, and they build their kilns as they might build a housing structure that is supposed to last 100 years. Second, there is a definite tendency to copy existing designs, so that the worst examples of inefficient and ineffective curing kilns tend to become standard practice.

Ordinary curing kilns are too heavy for curing. All statistics show that such obsolete curing kilns consume 250 per cent more steam than do modern, light, well insulated kilns.

■

NCMA Publishes Home Planning Book

A series of 40 concrete masonry home designs for every family budget and taste highlight a new home plan book prepared by the National Concrete Masonry Association. Titled "Concrete Masonry Homes," the 64-page book shows the planner, builder and prospective homeowner the possibilities of beauty and economy in new homes built of this material.

The book also contains a report on financing a new home, six pages in full color showing interiors and exteriors, and an eight-page pictorial section on various design effects achieved through the use of block.

■

Cement Shortage

Milwaukee's critical cement shortage got some measure of relief with the arrival of a boat of cement from West Germany. The shipment of 8,800 barrels was the largest single shipment of foreign cement to come into Milwaukee and the first to be received from West Germany. It was for Kolinski Concrete Company for use in its ready-mix plant.

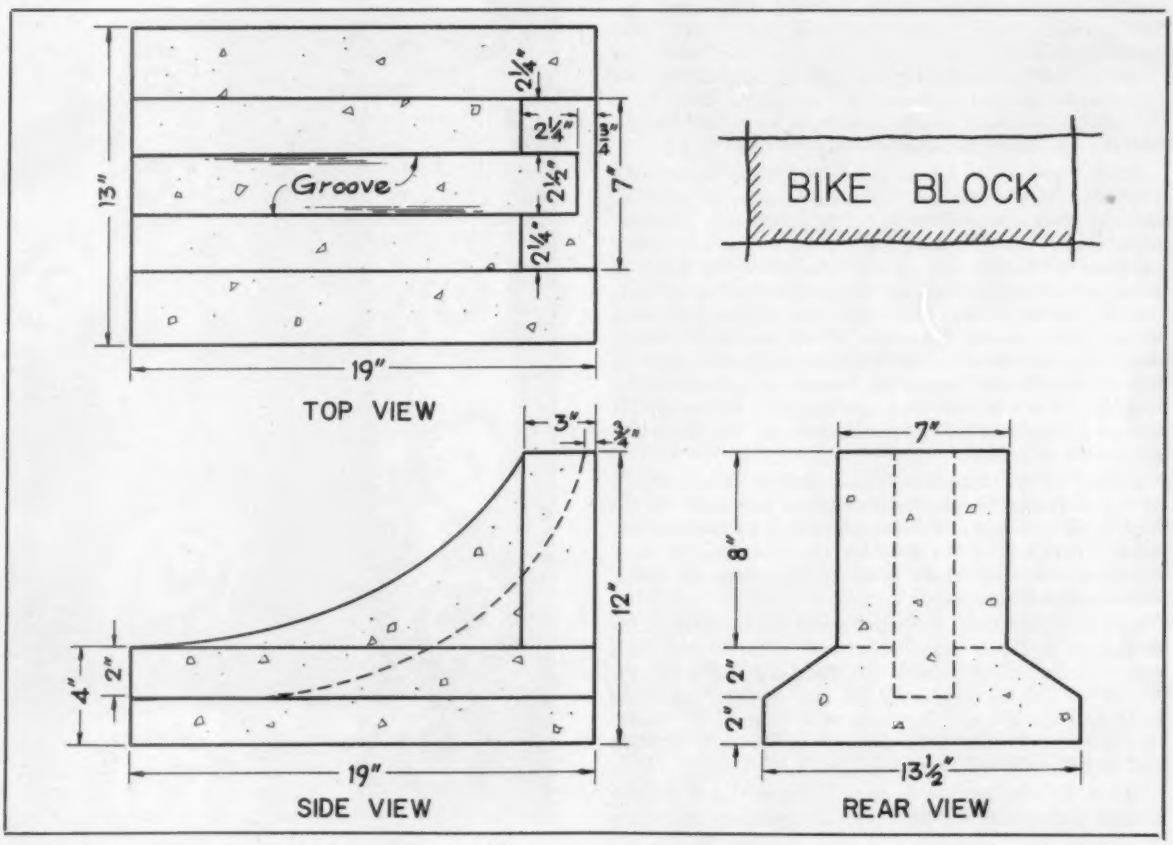
Precast Bike Stand

By PORTER V. TAYLOR

A precast stand for supporting bicycles has been developed by Everglades Industries, a Miami firm. The stands have come into widespread use in the area, particularly in places where a considerable number of teen-agers congregate with bicycles. Each school in Dade and Broward counties uses 75 to 100 of them, and many more have been purchased by theatres, amusement parks, libraries, bowling alleys, and cafeterias.

The stands provide an orderly system for parking bicycles in large numbers. They are usually spaced a few feet apart and in rows back to back. This permits large numbers of bicylers to come and go at once with minimum congestion and confusion. The schools and business firms like this, and they also appreciate the fact that no painting or upkeep is necessary. The stands cannot rust, and are reinforced so that even with rough treatment they are still serviceable. There is no need to bolt them down, since each stand weighs approximately 125 pounds.

The stands are made with wooden molds which are not patentable. They have been manufactured by Everglades Industries for several years, and according to Al Kronowitz, secretary-treasurer of the firm, the average mold will last about one year. The selling price of the bike stand ranges from $1.95 to $2.25, depending on the quantity ordered.



Debating 2-Way Radio?

If you are, you'll be interested in the conclusions reached by one of the nation's foremost producers of ready-mix

By R. Z. LA TERZA

Communciations Products Dept.
Radio Corporation of America

AL FISH, who heads Material Service Corporation's vast ready mixed operations in Chicago, was among the first of the industry's leaders to realize that 2-way radio could increase efficiency in both plant and fleet functions. Based on his recommendations, top management of the corporation decided to conduct a scientific study in a one-plant installation to determine just how radio would improve operating procedures.

Yard Number 18, set in a semi-suburban community southwest of the city, was selected because it provided the best gauge of average working conditions. A 2-way radio system was installed and the study was put in the hands of an industrial engineer who proceeded to make a comprehensive analysis over a stipulated period of time. Several makes of mobile radio were utilized and compared. Some operated in the 30-50 megacycle band; others in the 450-470 band. Every pertinent detail of how radio affected operating procedures was carefully recorded. When all the data was compiled and analyzed, it was interpreted in terms of profit or loss from the investment in radio.

Results of the documented case history were summed up by Material Service assistant vice president Alfred Rodriquez who said: "We time studied every move of our mixer trucks out of that yard for one month so we think we know what the return is on an investment in radio. We are convinced it pays".

Shortly thereafter, Mr. Rodriquez placed orders for equipping 8 batch plants and 160 mixer trucks with 2-way radio. Subsequently the company extended the service to include 3 more yards and approximately 30 additional trucks, and has indicated, that as its ready-mixed-concrete operations expand, more base stations and mobile units will be added.

What did the case study show? Essentially it demonstrated that radio increased overall operating efficiency

and reduced costs because of two basic radio benefits — instant communication between the driver of the truck and his dispatchers, and positive control of the vehicle after it leaves the plant.

From these two governing factors come the following list of profit-making advantages provided by 2-way radio:

(1) Servicing of vehicles when breakdowns occur is speedier. The mixer truck is back in action faster, and costly jack-hammer job may have been averted.

(2) Service vehicles can be directed to the next job instead of returning to the garage or seeking new instructions.

(3) Mixer trucks loaded with concrete can be diverted from one job to another when delays or cancellations occur.

(4) Radio control makes possible a tighter delivery schedule, using exact number of trucks required by each job.

(5) In-yard operations are speeded-up; driver makes only one stop.

(6) Overtime is reduced; plant closes without waiting for last truck to return.

(7) Concrete engineer, dispatcher, salesmen, or supervisors can be "everywhere at once". This saves mileage and relieves the driver of responsibilities that are actually not his.

(8) Two-way radio communication eliminates time, trouble and expense of driver's phone calls. Enables him to get directions direct from dispatcher or other drivers.

(9) Aid to accurate cost-keeping; driver can relay information on mileage, time of departure and arrival, pouring, loading, and similar matters.

(10) Radio is a plus feature in selling ready-mixed concrete service to new customers.

(11) Radio expedites deliveries in emergency periods. If one of the batch plants has a temporary breakdown or more work than it can handle, mixer trucks can easily be shuttled back and forth between plants.

(12) Radio helps meet the contractor's schedules 100 per cent of the time . . . thereby reducing his overtime and idletime costs.

(13) Radio provides closer control over quality of concrete.

(14) Radio increases customer satisfaction. The dispatcher is able to give positive and accurate information any time of day.

(15) Possible disagreements between driver and customer's personnel are avoided. Radio gives driver a sense of security at all times.

What do all of these advantages add up to? Obviously, greater efficiency and reduced costs, but in what degree? In Material Service's experience, radio has increased production between 10 per cent and 15 per cent. Ninety trucks with radio are the equivalent of 100 without, in Mr. Rodriquez's estimation. "Today", he said, "radio has become an indispensable part of our operation. I am sure that neither management, supervisors, dispatchers nor drivers would want to operate without radio, and I imagine in 5 years from now it would be unthinkable to go into the ready-mixed-concrete business without 2-way communication."

Mr. Fish pointed out that radio increases overall operating efficiency — in the plant as well as on the street. "Drivers returning to the yard can get instructions on the next load without getting out of their trucks. By the time they get under the hopper everyone is fully informed and the driver is on his way without time lost in getting out, walking and talking. And our figures show that every minute we save is worth at least 10 cents — which is far more than the per minute cost of radio!" Mr. Fish summed up his appraisal of mobile communications as follows: "Two-way radio gives you control of all equipment, at all times, and under all conditions — and that covers a lot of ground in the ready-mixed-concrete business".

(*Turn to page* 34)

Concrete Unlimited —

THE MARIETTA STORY

● President Frank L. Christy at the door of the company plane.

IN 1915 a country school teacher named Frank L. Christy pocketed his $2,000 savings and departed the Ohio village of Churchtown to make his way in the business world in the neighboring city of Marietta. Today Mr. Christy is president of what is probably the most diversified concrete business in the world — and his $2,000 has grown into the multi-million dollar Marietta Concrete Corporation.

The growth process hasn't all been steadily uphill. There have been numerous peaks and valleys, anxieties to offset triumphs, and wrong guesses as well as successful ones. But throughout these years, one pervading philosophy has guided the destinies of the Marietta people — the solid conviction that concrete is the world's most versatile construction material, and the uses to which it can be economically put are virtually endless. Marietta has been exploring and exploiting dozens of these uses for many years — to the benefit not just of themselves but also their customers and the entire concrete industry. If one Marietta contribution to the industry had to be selected above all others, it would be their pioneering ingenuity which has carried concrete into many previously unexplored fields.

The rock on which the Marietta operation is firmly anchored is the concrete stave silo. But even this operation has undergone radical change. Marietta began business is 1916 as a manufacturer of wooden silos. The building of concrete silos — a tremendous innovation in silo construction — began in the basement of the wood stave plant. The first concrete silo, erected in the early 20's on the Dawes farm near Marietta, in extreme Southeastern Ohio, is still in use. The biggest impetus for concrete growth came in 1925 when Marietta bought 18 acres of deep glacial deposits from the Inland Sand Company. Here the second Marietta plant was built in 1928, and interlocking concrete silo staves and industrial bins went into mass production. Marietta has been growing in concrete even since.

How do the Marietta holdings stack up today? In Marietta, Ohio, there are three plants manufacturing:

1. Precast panels for commercial and industrial buildings, shipped primarily within a 500-mile radius. Here

● Here is a view from the air of the Marietta Concrete Corporation home plant at Marietta, Ohio.

also are made swimming pool units and the panels for Marietta's custom-tailored panel-built buildings which are designed and erected by Marietta crews;

2. Farm silo staves;

3. Staves for industrial storage bins (larger than farm silo staves and engineered for a specific job). These also are erected by Marietta crews, one of which just completed the largest stave structure in the United States, a 40 by 120 foot building for the Standard Oil Company of Ohio;

4. Beslite, a lightweight aggregate manufactured from local clay. Opened in 1949, this plant now turns out 550 tons of Beslite a day, about 20 per cent of which is used in Marietta products and the remainder marketed commercially — mainly in Ohio and West Virginia;

5. Ready-mixed concrete and concrete block — about 1½ million units last year including 20 or more different block patterns;

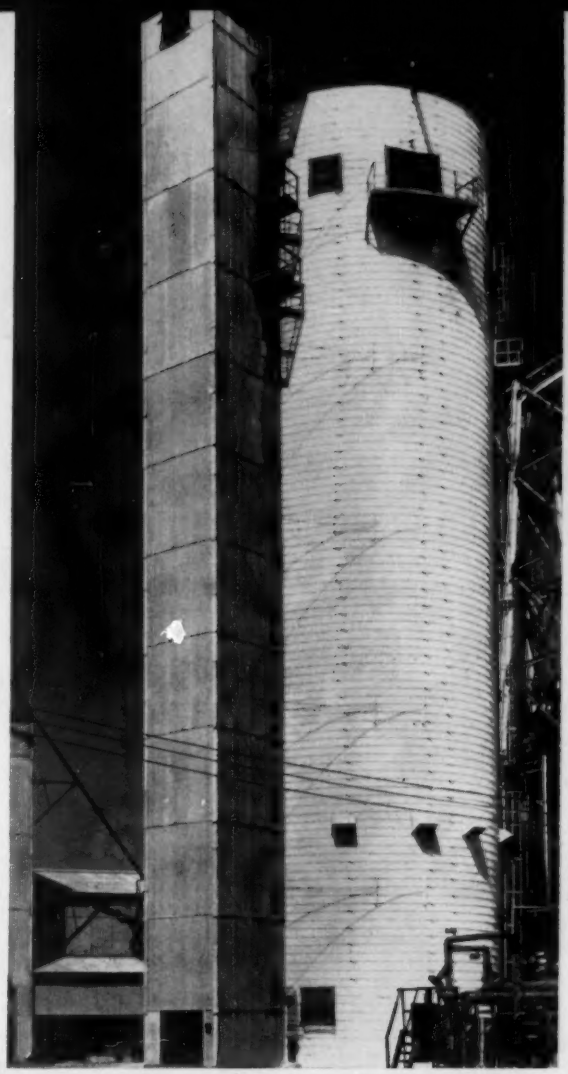
6. Custom-built concrete forms;

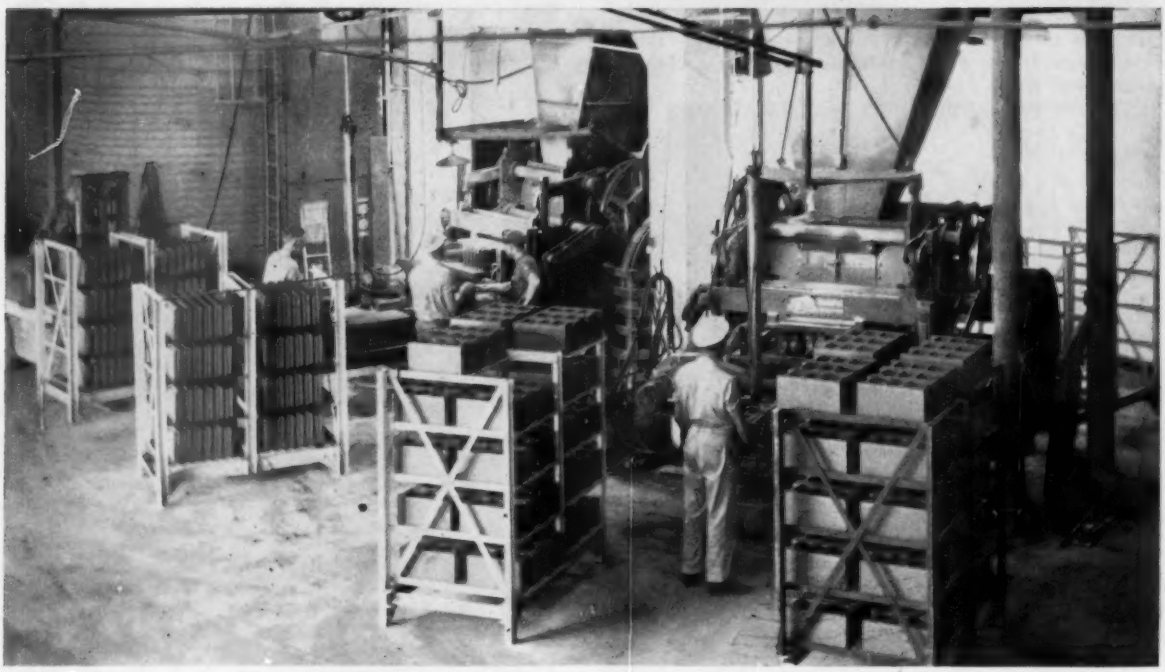
7. A large building supply store, including everything needed to build a house or a small commercial structure.

In Baltimore, a plant manufacturing staves for industrial bins and concrete block was opened in 1935. Last year a new plant to build panels and swimming pool units was added.

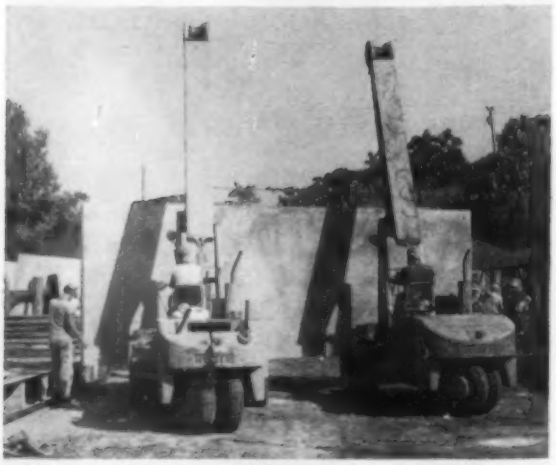
A stave plant was opened in Charlotte, South Carolina, in 1948.

Three years ago, a plant to manufacture staves and

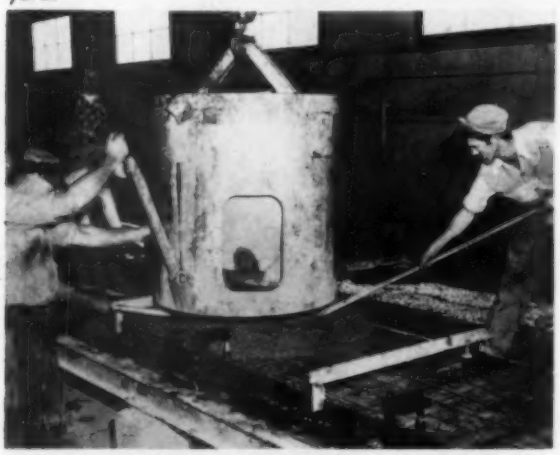




● RIGHT: The country's largest prilling tower — the first of its kind to be built with precast concrete staves — was designed and constructed by Marietta for Sohio Petroleum Company of Lima, Ohio. BELOW: Inside the plant, adjacent machines turn out diverse products. The one on the left produces staves; the one on the right, block.



● Two of Marietta's mobile cranes are here shown engaged in handling a large precast panel in the storage yard.



● A 1-cubic yard bucket handled by an overhead crane transports concrete from the mixer to the casting tables, where metal forms, with wire-mesh reinforcing already in place, await filling.

● One of the strongest merchandising organizations in the concrete products field, Marietta goes to considerable trouble and expense to build and maintain mobile displays like the one pictured above.

concrete block was completed in Nashville, Tennessee. This year a panel plant was added to the Nashville property.

In 1954, a plant was constructed in Jamestown, New York, to manufacture silo and bin staves, plus concrete block and ready-mixed concrete.

To carry out these diversified operations, Marietta employs about 350 people in all, and operates some 140 cars and trucks in addition to their contract carriers. A breakdown of Marietta sales among its principal component parts would look something like this:

Farm Silos	30%
Concrete block	25%
Building materials & supplies	15%
Panels	13%
Industrial bins	12%
Beslite	5%

The outstanding feature of the Marietta operation is its remarkable versatility. Convinced as they are that practically anything can be done with concrete, the Marietta people are willing to tackle almost any project, no matter how outlandish it may sound.

As one Marietta official put it: "We'll take a crack at almost anything — once. Sometimes we're sorry; but most of the time it leads us into profitable territory."

This pioneering spirit has resulted in some notable failures — but it has also produced some much more remarkable successes. And overall it has had a tremendous impact on public acceptance and knowledge of concrete.

The Marietta technicians pride themselves on being able to adapt precast concrete to any needed design. As a result, they have turned out such items as a self-feeding cafeteria for cows, a precast concrete beach (to take the pounding of heavy waves generated by blowers for testing Navy equipment), a precast grandstand for the local high school, a buffer for jet streams in testing supersonic aircraft, and a pit for containing waste radioactive materials.

When they put in a new weighing device for their trucks, the weighing equipment arrived before the platform and got in the way of Marietta workers. It finally became easier to eliminate the annoyance than to wait for the platform; so Marietta simply precast a platform and the job was completed. The company manufacturing the scales was so impressed by this that they are now negotiating with Marietta to precast all of their weighing platforms.

After bidding unsuccessfully on two sewage treatment plants for panel construction, Marietta got a call from a third which began: "We hear you people are experts on sewage treatment." Marietta played it straight and got a contract to precast affluent troughs for the treatment plant — the first time they had attempted such a job.

They even received a request recently from a doctor in Iowa who wanted them to cast an exposed colored aggregate panel for use in a shower stall in the doctor's home. Marietta was willing but the price discouraged the doctor. At the time this was written, Marietta was precasting forty street corner posts for use by the local Lion's Club. They are also experimenting with a mortarless block which they can make rather easily in their tongue-in-grove stave machines.

The only standard item (with the exception of block) turned out in the products plant is a small parking chock, which is made with left-over concrete.

"We try not to throw any concrete away," one workman explained.

Cement shortages have so far offered no serious problem to Marietta. They have space to store about 4,500 barrels and have always been able to stockpile a large enough reserve to carry them over the rough spots — although the cement situation got very tight last summer when Marietta's reserves were almost depleted.

All Marietta products are made with air-entrained concrete. Air-entraining portland cement is used for everything except the wall panels, and here air-entraining agents are used with high early strength cement.

In addition to diversification of products, the other area in which Marietta has earned a special merit badge is sales promotion activity, which runs the gamut from trade paper advertising to an elaborate annual party given from farm people in the Marietta area. Some 2000 farmers turn out for this event, which is built around field exercises conducted at the experimental farm owned by the Marietta Company. Several nearby agricultural colleges are also invited to conduct classes during this meeting.

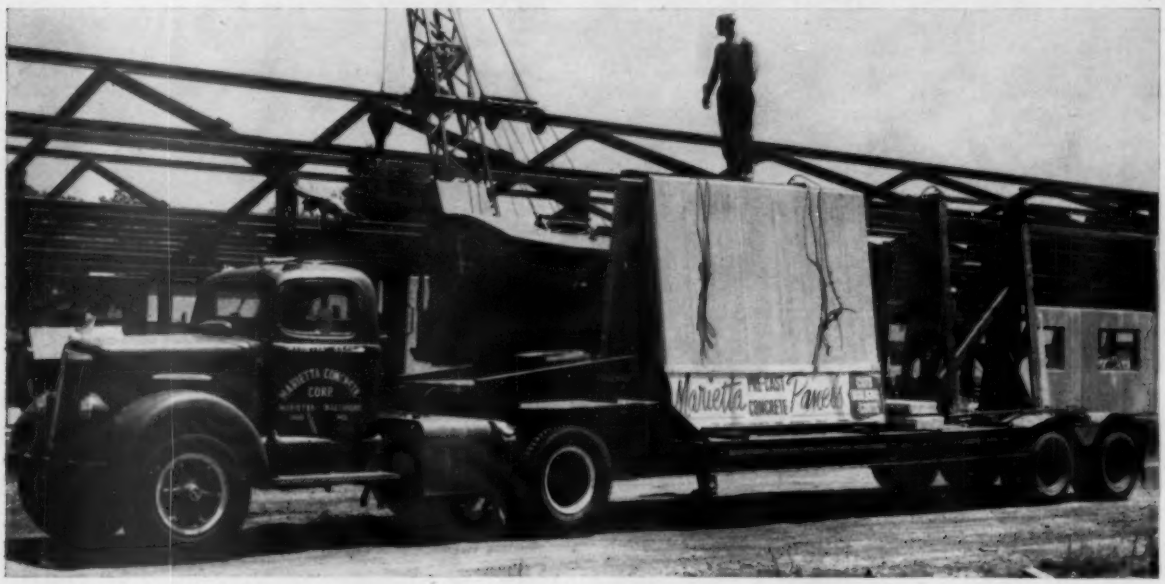
Much of the other Marietta sales promotion activity is concentrated among the farm people who gave Marietta its first shot in the arm by buying concrete stave silos. With the farm directors of radio stations WLW Cincinnati and WSM in Nashville, Marietta farm experts have gone out in the field to cut program tapes on silage problems. They also conduct a hay and silage show each year at the Ohio State Fair, and take part in numerous other less pretentious exhibits, where distributors usually pay for the space but Marietta supplies the exhibit. Marietta owns four mobile exterior exhibits and three scale models of a barn and silo for use in interior displays — and these are all busy most of the time. Many of the mailing lists for Marietta farm promotions are picked up at these exhibits.

Marietta has also produced a 27-minute color-and-sound farm film called "Grasslands Farming" and runs a regular schedule of paid advertising in regional farm magazines. And, finally, Marietta has always made extensive use of radio and now television advertising. They promote their silos and building supplies with radio spots and news-weather programs in Jamestown, Nashville, Marietta and Cincinnati and are using television in Huntington and Parkersburg, West Virginia. The farm silos are still bread-and-butter to Marietta. They were the first product, are still the biggest, and continue to take the lion's share of sales promotion activity. Last year, Marietta had 37 farm construction crews in operation, averaging 2½ silos a week from March through September.

Panels and silos are sold for Marietta principally by manufacturer's representatives — "anywhere east of the Mississippi". (However, like every other apparent boundary at Marietta, this one has often been violated. The company is now constructing five jobs west of the Mississippi River.) Marietta staff people make calls with the representatives until they know the ropes, then they are supplied with inquiries from the Marietta advertising program to follow up. When a sale is imminent, customers are put in direct contact with Marietta engineers who close the deal and make arrangements for the design, engineering and sometimes the erection of the structure.

The Marietta Company is also acutely conscious of the necessity for good community relations. One of the best tools they've found for building local goodwill is the twin-engine Cessna aircraft which is used to fly company officials on frequent and extensive business trips. On a number of occasions, the Marietta plane has been used to take care of townspeople in emergency situations.

The prefabricated panel business is the newest white hope of the Marietta Company. They got into this business by the back door a few years ago when a contractor went broke on a large panel structure and Marietta stepped in and completed the job. Since then the panel business has grown steadily and gives indications of branching into all sorts of interesting and productive byways. Marietta's panel plant employs production line techniques, designed originally by Neil Christy and improved on through experience in the panel-making business. The panels are fabricated in a building 350 feet in length, which contains three parallel tracks on which the panel forms move along the production line. Ready-mix trucks deposit concrete in a hopper which moves



● Despite their weight, Marietta's precast panels are competitive even at great distances from the plant in which they are manufactured.

above the panel forms and feeds the concrete into the panel being cast. It then moves along the line and is progressively broomed, and taken over a succession of steam pipes. The panels are left in the forms at the end of the assembly line for 20 hours, then are hoisted off the rails and into a steam curing chamber, where they are kept for 48 hours. They then spend at least seven days curing in the yards before they are loaded on a panel truck to be delivered to the building site.

Panels are designed and engineered for a specific job. Panels are numbered and must be coordinated in shipment and fitted together in construction like a gigantic jigsaw puzzle. When everything is in high gear at the panel plant, Marietta is able to turn out about 5,000 square feet — or 50 concrete panels — per day.

In addition to the panels which Marietta produces for use on an outside-contracted construction job, the company also packages entire buildings. The panel-built building idea was dreamed up by Marietta on behalf of small businesses that couldn't afford to hire an architect. Marietta will move in and take over the complete job, including design, engineering and erection of the building.

Another recent sideline of the panel business that has been mushrooming is precast swimming pool units. In a pool-conscious age, the Ohio firm has been able to supply economical concrete panels for the sides and bottoms of pools, and two of the large swimming pool construction specialists now buy all their panels from Marietta. (They recently received an order for 500 pools.) Marietta has long been experimenting with the use of exposed colored aggregates and this experimentation is now being accelerated with the growth of the swimming pool business. Both colored sides and colored walks around the pools are now being precast.

The Marietta Company last year grossed just under $6 million — which probably entitles it to the label of the largest concrete panel and silo stave manufacturing concern in the nation. Marietta's scope and size represents a burning belief in concrete on the part of the people who run the company. Today the operating reins are still very much in the hands of the Christy family. The elder Christy actively runs the business, and shows no visible indications of slowing up. When and if he does, he has three sons ready to step into his shoes. Two — Leonard as vice-president for sales and Neil as vice president for engineering — are already in top managerial positions. The third son, Bob, is still working in the plant, learning the business from the inside out.

Sitting in his unpretentious quarters in the residence overlooking the Ohio River which his company has converted into an office building, Frank Christy still sees great things ahead for concrete.

"I think the concrete industry," he says firmly, "is just in its infancy. We can look forward every year to more and more things being made out of concrete."

This kind of vision has built a giant in the concrete field — a giant which apparently has every intension of continuing to grow, outward as well as upward.

Debating Two-Way Radio?

(*From page* 29)

Since each Material Service plant functions independently, each is equipped with its own 2-way radio system covering the geographical area which it serves.

Fifteen-watt base stations were installed at each of 11 yards. These compact, desk-top transmitting and receiving units operate in the 450-470 MC band, each sending and receiving messages from trucks assigned to the yard in which it is located.

Mobile radios, usually installed in the cab of the truck, also are 15 watt UHF transmitting and receiving units. All systems operate on the same frequencies but are carefully planned geographically to eliminate reception of each other's signals.

Said to be the world's largest supplier of building materials, Material Service Corporation operates 5 stone quarries and 4 sand and gravel plants in the Chicago area. From these points tremendous amounts of material for ready-mixed concrete and other products are moved into Chicago every day by a large fleet of company owned barges and trucks.

Most of the corporation's 13 ready-mixed-concrete yards are located along the Chicago River and its north and south branches. These sites were carefully selected to allow minimum hauls of materials to jobs — in fact, mixer trucks average only 3 to 4 miles per load, round trip. Traffic in the urban areas served by most of the plants presents many problems resulting in expensive delays to the movement of $60,000,000 worth of materials which the company delivers annually. Today radio communication has become an important part of the machinery used to control or eliminate many of these delays.

Head of the corporation is Henry Crown, an industrial genius who started as a $4 a week messenger and now owns the Empire State Building, two railroads and a dozen assorted businesses. In 1919 he and two brothers organized the Material Service Company, and when Chicago went through its large scale building program, the Crowns captured the biggest part of the supply business from eighty competing firms. The corporation now employs three thousand people, operates 8 tug boats, 150 barges and the world's largest fleet of radio-controlled truck mixers.

■

1955 Slag Production Record

Uninterrupted and slightly accelerated steel production, and increased demands for slag as a mineral aggregate, resulted in a new record tonnage processed by the iron blast-furnace slag industry. 1955 production was 32,438,017 short tons valued at $46,307,898 compared to 1954 output of 29,235,142 short tons valued at $39,476,408.

Screened air-cooled slag increased 11 per cent. Ninety per cent went into concrete construction, railroad ballast, bituminous construction, and other construction work. Expanded slag production increased 11 per cent also, most of which was used in the manufacture of lightweight concrete block.

Statistics were compiled from a National Slag Association canvass made in cooperation with the Bureau of Mines.

Father-and-Son Partnerships

One of the common forms of partnership among small business enterprises is that composed of a father and one or more of his sons. In addition to the advantages usually associated with a partnership, that between a father and his son may have additional values, some intangible and some long-range.

Yet many manufacturers blessed with sons of excellent character and latent abilities resist bringing their offspring into the business as partners. At the same time, other manufacturers regret their inability to interest sons in the business and reluctantly watch them go into other pursuits. This ironically underscores the perverseness of the human animal. Too often those who desire a father-and-son partnership are denied it while those who could have one reject such a partnership.

In operating as a sole proprietorship or closely held corporation, a manufacturer must reconcile himself to the inescapable fact that someday the business which he has built carefully over the years must be liquidated or pass to alien ownership, either because of the founder's retirement or death.

Bringing a son into a business assures a manufacturer that the business will likely continue without interruption for at least one more generation within the family. It postpones by perhaps 25 or 30 years or more the day when the business must be sold, perhaps at considerable loss. Not infrequently, a manufacturing venture may be continued for several generations within the founder's direct line of descent.

It is not suggested that ties of blood automatically assure successful partnership. Such a prospective partnership, regardless of relationship of principals, may present certain perils as well as the more obviously considered advantages.

Ties of blood will not make an incompetent person into a competent one, or transform an irresponsible son into a responsible partner. On the other hand, a son by his very youth is entitled to special consideration in evaluating his maturity and the experience and judgement which are the peculiar evidences of greater years. A father, critical of his son's seeming lack of steadiness, may well cast his thoughts back to his own youth and his own first years in business. At this point, a son may appear in a more favorable light.

A certain indefinable youthful eagerness may have considerable value in a business, even though a son is woefully ignorant business-wise. Few manufacturers — if any — are born with superior management skills. The most successful ones admit that what they know they have had to learn, often under the patient guidance of others, sometimes by trial and error. A manufacturer's son, given the capacity, can repeat what his father has done, even surpass it.

Yet there is a tendency for fathers to expect too much of their offspring. This can be a destructive form of egotism in which father and son are equally victimized — the father in not having a son for a partner and the son denied a partnership because he does not measure up to impossible standards.

Not infrequently, sons of manufacturers are obliged to strike out for themselves in order to enjoy the opportunities denied them by hypercritical fathers. One case comes to mind in which a son, after repeated rebuffs by his father, left his father's employ and founded his own business. The son's business today is prosperous, while the father's, never a conspicuous example of success in the industry, is going downhill as the father's drive of his younger days wanes. With mixed pride and regret, the father belatedly admits refusing a partnership to his son was the "worst of many blunders" he made.

In other cases, sons who see their hope of a partnership dimmed, throw in the sponge but continue working for their father. The ambitious fires of youth are banked and they quietly slip into a state of resigned but smoldering resentment. Not infrequently, such sons become the butt of sly jokes behind their backs. Often, other employees as well as a good part of the community conclude such a son is lucky to have a father for whom to work. There is the implication that the father is propping up the son though the facts, if known, might more accurately point to the conclusion that the father is holding back the son. With the passage of time, a son may live up to the role in which he has been cast. As they say in show business, he has become "typed."

Less fortunate is the son who is denied a partnership but who is expected to function as such by his

(*Turn to page* 42)

The users and makers of concrete block have long been exasperated by a cumbersome and time-consuming procedure for determining the moisture condition of the hardened product. As against the 48 to 72 hours required to saturate and oven dry the material, a new procedure gives reliable indications in from 15 to 30 minutes. It's the . . .

MENZEL RELATIVE HUMIDITY METHOD

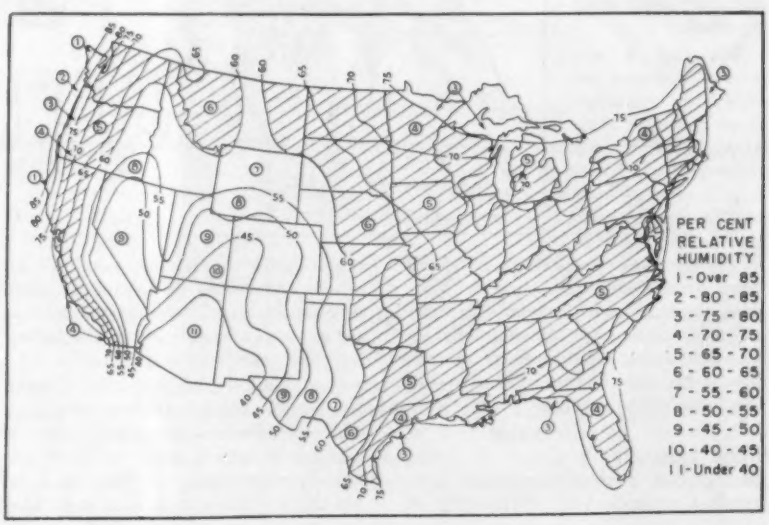
A RAPID METHOD and simple apparatus have been developed for determining and expressing the moisture condition of hardened concrete block directly in terms of relative humidity. The method and the apparatus, both the work of Carl A. Menzel, consultant on concrete technical problems for the Portland Cement Association, have been thoroughly field tested and there is every indication that a valuable new tool has been forged for the concrete block industry.

Proceeding from the premise that the drying shrinkage of concrete masonry walls can be minimized by drying the individual units to the average moisture content they would attain in service, Mr Menzel set for himself the considerable task of developing a simple and speedy procedure for determining when block are dry enough for exposure to different service conditions. After some years of painstaking work in both the laboratory and the field he has perfected an inexpensive apparatus which gives indications of the moisture condition of block in 15 to 30 minutes, as compared with the 48 to 72 hours required for tests of moisture content and absorption under present specifications.

The Menzel test procedure is of considerable interest to the block manufacturer for the performance of plant inspection tests to determine when various lots of block are dry enough for a specific purpose, or what additional drying may be required. It may also be used, of course, for the performance of acceptance tests.

The following description of the apparatus and procedure are from Mr. Menzel's paper presented at the 58th annual meeting of the American Society for Testing Materials last year:

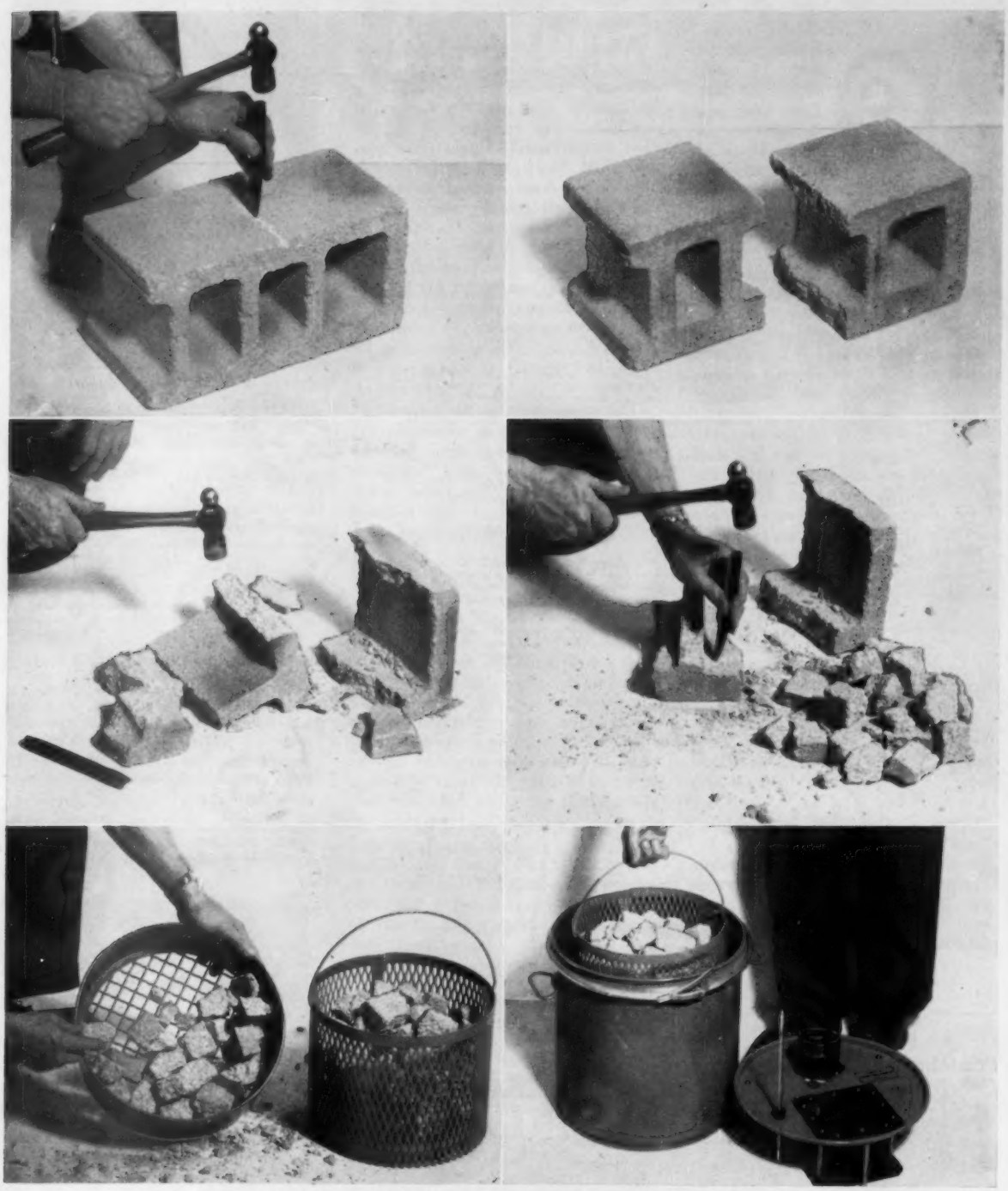
A block, representative of the group whose moisture condition is desired, is broken with a hammer and cold chisel into small pieces or lumps ranging from 3/4 of an inch to 2 inches in maximum dimension. These freshly broken lumps are



● The map pictured here shows the average annual relative humidities for various regions of the United States. The readings indicate the moisture condition to which block should be dried to minimize moisture shrinkage in walls exposed to outdoor air.

promptly placed in an expanded metal pail which is then sealed in a vapor-tight metal container having a quick-closing cover provided with a blower with external motor. (See illustration) The blower circulates the air inside the container to facilitate an interchange of moisture between the air and concrete lumps and to reduce the normal lag in response of the humidity-sensitive element of the hygrometer. This interchange continues until an approximate balance between the moisture in the concrete and the relative humidity of the air in the container is attained. The per cent relative humidity is indicated by the position of the pointer on the graduated scale of a suitable hygrometer under the cover. All readings of relative humidity are corrected by a calibration curve based on periodic tests of the hygrometer against known relative humidities which are established within the container by five saturated salt solutions.

During the test a series of spot



How a 3-core block is prepared for the Menzel test.

Menzel Method

(from page 37)

readings of relative humidity are made at definite periods and, after correction, are plotted promptly to provide a time-humidity curve for indicating the trend toward a final relative humidity, that is, where the curve levels off to a constant value. The final relative humidity, indicating the moisture condition of the block, is attained in about 15 to 30 minutes and usually within 20 minutes. Hence, this significant and realistic information can be obtained in less than 1 per cent of the 48 to 72 hours needed to saturate and then oven-dry block to constant weight as required by present specifications.

The usefulness of the test may be illustrated by a few examples. If the hygrometer should indicate a final relative humidity of, say, 70 per cent, this means that the block is dry enough to experience little if any shrinkage from drying if it goes into a wall exposed to an average relative humidity of 70 per cent. Similarily, if the hygrometer indicates a final relative humidity of 50 per cent, the block is dry enough for use in a wall exposed to an average relative humidity of 50 per cent. However, if the hygrometer indicates 90 per cent relative humidity, then the block is too damp for use in a wall that is normally exposed to an average relative humidity of 70 per cent or lower. Hence, this method quickly indicates if a group of block are dry enough for the average relative humidity to which they will be exposed in service. The same method will also indicate when block are at the desired moisture condition for the application of glazes and metal surfaces or for other purposes where moisture condition is to be controlled or determined.

In addition to its simplicity of operation, the apparatus can be easily calibrated or checked for accuracy and can be used under a variety of conditions. For instance, it can be used to determine the moisture condition of block soon after sample block have been selected, or if desired, the test can be made at any convenient later time. In that case, each sample block after selection is stored and sealed immediately in a closed metal container to prevent moisture change. Each block can then be transported to the laboratory or place where the apparatus is located and tested in the prescribed manner.

The apparatus can be assembled from readily available standard parts and materials at less than half the cost of the drying oven, weighing scale, saturating tank, and other items necessary for the conventional moisture test on concrete block.*

* It may also be purchased as a complete package, including equipment and supplies for calibrating, from Central Scientific Company, 1700 Irving Park Road, Chicago 13.

N. Y. Masonry Group Plans Annual Meeting

The annual meeting of the New York State Concrete Masonry Association will be held at the Hotel Roosevelt in New York City on Oct. 11 and 12.

Henry C. Quaritius, Jr., president of the Association, and William Fagan, both of Brooklyn, are in charge of arrangements for the two-day session. Wives of members have been invited, and special events are being planned for them.

■

Pontchartrain Bridge Officially Opens

The world's longest bridge, running 24 miles across Louisiana's Lake Pontchartrain, was officially opened on August 30th. The causeway represents the largest application of precast, pre-tensioned concrete construction in the world. Responsible for designing the prestressing facilities and for supervision of construction and production on the bridge deck was the Freyssinet Company of New York, retained for the service by the Louisiana Bridge Company.

By using prestressed concrete instead of an alternate structural steel design, the builders and users of the bridge were saved 27 per cent, or $7,400,000. In addition to this sum, future maintenance costs should be very low because of prestressed concrete's unique qualities.

■

Badger Block Producers To Convene in January

The 36th annual convention of the Wisconsin Concrete Products Association will be held at the Plankinton Hotel in Milwaukee next January 16th and 17th.

PLANT NOTES

Concrete Products Company has opened a ready-mix plant at Batesville, Arkansas. It will serve a 50-mile area.

Lake Erie Flexicore, Incorporated, will build a $300,000 plant in Kent, Ohio. Scheduled to start operation next January, the plant will produce precast hollow reinforced concrete slabs for roof and floor construction.

Brown Supply Company, of Lubbock, Texas, is currently constructing a concrete pipe plant at Garden City, Kansas. To be completed near the end of October, it will serve the southwestern Kansas market.

The Lorain Crystal Ice Company of Lorain, Ohio, has erected a new block plant capable of producing 6000 block a day.

Consumers Company, Chicago producers of ready-mixed concrete, has established a prestressed division which will manufacture and sell prestressed structural units for use in buildings and bridges.

The Arundel-Brooks Concrete Corporation of Baltimore has erected an additional pre-mixed concrete plant at Sparrows Point. It will have a capacity of 150,000 cubic yards per year.

■

Texas Block Group Meets

The Texas Concrete Masonry Association will meet October 15th and 16th at the Del Camino Motel in El Paso. The program will include speeches by Earl Peterson, president of N.C.M.A., and Carl Menzel, technical problems consultant for the Portland Cement Association.

■

Canadian Products Men To Meet in Montreal

Members of the Canadian National Concrete Products Association will hold their eighth annual convention at the Sheraton Mount Royal Hotel in Montreal January 17, 18, and 19th next year. Since World War II, the industry has made rapid strides in Canada, and it is expected that production records will again be set this year by all sections of the industry.

Dealers Increase Business with Symons Form Rentals

Because concrete forming is one of the first construction steps, many Ready-Mix and Building Material Dealers are renting Symons Forms to local contractors. Contractors find that these strong, easy to erect forms save them considerable labor and time, and insure safety no matter how fast the mix is poured.

Symons Form Rental bring the Dealer *—new ready-mix customers, added rental profits, repeat sales of hardware and ties, additional lumber and plywood sales, increased building material sales and customer satisfaction.*

Samples, specifications, actual job photos, literature and forms layouts for building your own Symons Forms are available upon request. However, for guaranteed accuracy and low labor cost, we recommend factory made forms. Rentals apply on purchase of these pre-fab forms.

Symons

SYMONS CLAMP & MFG. CO. Dept. K-6
Chicago 39, Illinois
4257 Diversey Avenue

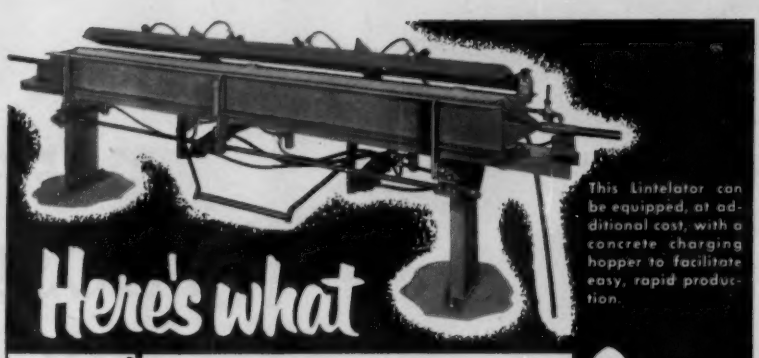
Please send complete information on buying and Building Symons Forms.

Name_____

Firm Name_____

Address_____

City_____ Zone____ State_____



This Lintelator can be equipped, at additional cost, with a concrete charging hopper to facilitate easy, rapid production.

Here's what ... Says about their KENT LINTELATOR

VIRGINIA DUNBRIK COMPANY
INCORPORATED

MANUFACTURERS OF
THE LYNCHBURG BLOCK AND CONCRETE ARTS

April 3, 1956

The Kent Machine Company
Cuyahoga Falls, Ohio

Attention: Mr. Daniel Urban

Dear Sir:

Many thanks for the helpful service rendered by the Kent representative, Mr. Carl Worrell.

It might be worth something to someone to know our experience with our Kent Lintelator. First, during this companys twenty years in business we have been making only block, concrete-type brick and lintels. About three years ago we were forced to improve our lintel operation and came upon the Kent Lintelator.

Now after three years of continuous operation we give you our reason why you cannot get it back. One operator slugs mixes and makes more than fifty lintels in an eight hour day on our Lintelator. These are better lintels - both true and good texture. This Kent Lintelator has practically no maintenance and our operator would never consent to reverting back to the old method of making lintels.

Needless to add, the Virginia Dunbrik Co., Inc. has found the Kent Lintelator a very good and most profitable addition giving us a stock of lintels to meet the demand.

In appreciation you may use this company as a reference and invite your prospects to visit here and see and talk with the Lintelator operator.

Very truly yours,

VIRGINIA DUNBRIK CO., INC.

A. Kendall Sydnor
Sec., Treas.

BETTER LINTELS... TRUE & GOOD TEXTURE

•

PRACTICALLY NO MAINTENANCE

•

WOULD NEVER CONSENT TO REVERTING BACK TO OLD METHOD OF MAKING LINTELS

•

A VERY GOOD AND MOST PROFITABLE ADDITION TO MEET THE DEMAND FOR LINTELS

INVITE YOUR PROSPECTS TO VISIT HERE AND TALK WITH THE LINTELATOR OPERATOR

You, too, can profit by the experience of Virginia Dunbrick Company.

A glance at their statement above is convincing proof that a Kent Lintelator is a definite money producing asset in any block plant today. Some plants have several in operation every working day.

You'll doubtless find a worthwhile market for lintels through the customers you are now selling.

Act now when the opportunity is "ripe" and ask us for the complete, interesting "Lintelator" story.

The KENT MACHINE CO. CUYAHOGA FALLS OHIO
DIVISION OF THE LAMSON & SESSIONS CO.
CONCRETE PRODUCTS MACHINERY SINCE 1925
Canadian Distributor: Wettlaufer Equipment, Ltd., 49 Merton St., Toronto 12, Ontario

KEEP THOSE RECORDS

By HAROLD J. ASHE

THE making and keeping of business records has assumed proportions undreamed of twenty-five years ago. Where once it was optional that a concrete products producer make certain records and retain them only so long as they seemed to be useful, one law after another now spells out minimum record requirements which must be met. Moreover, most accumulating records should be retained indefinitely, or so common sense, if not experience, dictates.

The only apparent beneficiaries in this situation are filing cabinet manufacturers. The number of filing cabinets that a products producer has may be less indicative of the size of his operations than the length of time he has been in business. It is a brash manufacturer who will throw away any records, no matter how musty and ancient. No manufacturer can predict with certainty which old records may be needed for one compelling reason or another.

The plain fact of the matter is that there isn't much in the way of business records that a manufacturer can destroy without courting the possibility of serious trouble with one or another agency of government. The mere absence of certain records, however old, may serve only to heighten the interest of a government agent. That interest may turn into suspicion.

The termination of controls requiring the keeping of certain records, such as those on prices and wages, has been widely misconstrued by many businessmen as a signal to relax the keeping of aging records. Actually, the ending of these measures, with their regulations, enforcement staffs and voluminous reports, means only that records no longer need be made for these particular purposes or be supplied public agencies in these prescribed forms. This termination in no way affects other Federal and state laws requiring record keeping.

For Federal and state tax purposes alone records should be kept indefinitely. While, ordinarily, after a lapse of a few years, tax returns may not be challenged, this limitation does not apply when there is reasonable (from the government's viewpoint) ground for suspecting fraud. At this point, no matter how scrupulously honest a manufacturer may be, he had better be able to produce needed records to support his tax returns under scrutiny, regardless of how far back the government audit proposes to go.

All ledgers and journals should be retained, as well as all supporting evidence on which entries are based. There should be a fixed asset inventory, with evidence of capital outlays, as well as a depreciation record. A payroll record should be kept of employees earnings and payroll deductions, together with evidence indicating remittance of payroll withholdings to the respective agencies. Copies should be made of all tax returns and these should be filed away together with any correspondence pertaining thereto with the Internal Revenue Service.

Inventory work sheets should be kept as well as suppliers' invoices, credits and debits, together with records of receipts, bank statements, canceled checks, duplicate deposit slips or deposit books, petty cash records and all other data reflecting receipts and disbursements. Bad debts written off should be supported by a record showing the efforts made to collect including court action, if any, which was taken, or memoranda indicating the futility of initiating such action. Supporting evidence of casualty losses should be filed away for possible future reference.

A manufacturer should be equally careful to preserve all data needed to support expenses and deductions incident to non-manufacturing income. And, in his personal income tax returns, the personal deductions, such as medical expenses, taxes, interest and other items should be backstopped by evidence that such expenses were actually incurred.

In any question raised by a government agency, a manufacturer must be prepared to prove his right to a deduction in the case of income taxation or, in other instances, show that he has

(*Turn to page* 44)

Dodson's Digest

Dick Adams solves a highway-paving crisis

I was driving through a road-repair zone the other day, when suddenly I spotted a man on the highway in front of me wildly waving a red flag. I stopped the car, and Dick Adams came running toward me. Dick is a paving contractor, and a good friend of mine.

"Am I glad to see you, Dod!" Dick exclaimed. "I recognized your car, and..."

"I don't get it," I said, puzzled. "What's the idea of flagging me down?"

"We were almost finished for the day," Dick explained, "when we ran out of Calcium Chloride for our concrete. I've got some coming in the morning, but I wondered if you'd happen to have . . . "

"You're in luck," I grinned. "I always carry a bag of Calcium Chloride in my trunk for just such emergencies."

Dick's men got the bag and went on with their work. I stayed around for a while talking to Dick.

"I'm glad you came by, Dod," Dick said, after things got under way. "Because I wouldn't pour *an inch* of concrete without Calcium Chloride. These highways need that extra strength to . . . "

"And don't forget," I chimed in, "Calcium Chloride gives you increased workability – less water for the same slump. What's more, you get faster set, and . . . "

"You don't have to sell me, Dod," Dick laughed, "Calcium Chloride has saved me plenty of time and money over the years!"

"Well," I said, "I'd better be on my way. I'm late now, and . . . "

Just then, one of Dick's crew walked by carrying a "road closed" sign.

"Oh, oh!" Dick said, grinning sheepishly. "I'm afraid you'll have to go back up the road and take the detour. We used your Calcium Chloride for some repair work up ahead, and now you can't get through!"

"Now *that*," I chuckled, walking back to my car, "is what I call real gratitude!"

– L. D. Dodson

P.S. — Our folder, "How To Make Better Concrete Products and Ready-Mix," is packed with information on how to use Wyandotte Calcium Chloride in concreting. Drop me a line, and I'll send you a free copy by return mail. *Wyandotte Chemicals Corporation, Wyandotte, Michigan. Offices in principal cities.*

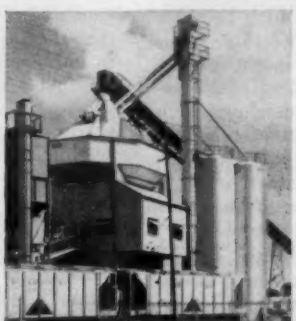
Wyandotte
CHEMICALS
MICHIGAN ALKALI DIVISION
HEADQUARTERS FOR CALCIUM CHLORIDE

"Repeater" automatically re-batches any mix selection

At the turn of a dial and push of a button, this Johnson automatic Batch Controller selects any one of 120 different size and type batches of aggregates and cement. It weighs out any combination of materials you set up on the central dial-scale control panel . . . and automatically repeats any batch selections for a pre-determined number of times.

The electric-control, 120-mix-selector panel provides for concrete of various strengths in any combination of materials, in ½ to 2 cubic yard batches. For each size batch there are individual selections for 3 to 6-inch slumps. Dial system makes it easy to change from one mix selection to another. To get any size or type of batch, operator merely turns the selector dial, sets the "repeater", pushes the "start" button . . . and the plant weighs out fast, with pinpoint accuracy. During the batching cycle, a lock prevents accidental change of the mix selector.

Nine material weigh-dials on the control panel have individual pen-recorders. Exact weight of each batch is automatically graph-recorded. Johnson transit-mix plant shown here has: six 5000-lb. aggregate batchers (two with automatic moisture-compensators) . . . a 3000-lb. cement batcher with dual fill valves for selecting 2 types of cement . . . a 2000-lb. water weigh-batcher, and a 5-lb. (80-oz.) air entraining admix batcher. All are fully automatic.



Whenever you plan a new plant . . . or want to modernize an existing set-up, look into the increased efficiency you can get with Johnson equipment. You'll find your Johnson distributor is at your service . . . ready to help at any time.

T9 BW

C. S. JOHNSON CO. CHAMPAIGN, ILLINOIS
Koehring Subsidiary

Partnerships —

(*From page* 35)

father. He is loaded with extra responsibilities while being denied the authority which a partner's status would confer. He is expected to exercise judgement and be devoted to a business in which, however, he has no more stake than any other employee. His opinion is rarely sought and never followed. His errors, however few, are counted and recounted as a justification for denying partnership.

Occasionally, a young son who has partnership potentialities is spoiled by an indulgent father. This preferential treatment is good neither for the son nor for the morale of employees. Eventually, the son becomes dependent upon the father and cannot assume responsibility, even when circumstances urgently demand it. His initiative and judgment have atrophied.

A father, in the mistaken belief that such treatment will toughen a son and bring out the best, may go to the other extreme. He may foist all of the most disagreeable tasks onto his son, even though an equitable distribution might more likely make many of these chores fall to other employees. This can have as devastating an effect on a son as pampering, creating resentments which will become a bar to any soundly conceived, effective father-and-son partnership. Discrimination, either in favor of or against a son, is a poor foundation on which later to build a solid partnership.

As between two unrelated partners, so too between a father and son in a partnership, there must be mutual respect and understanding. This cannot be established simply by incorporating a statement to that effect in partnership papers or spreading the sentiment on corporation minutes.

One of the most unfair situations which can exist, and which becomes progressively more intolerable with the passage of time, might be described as the "dangling" partnership. This is the partnership which never quite culminates but is held forth as a future prospect, year after year. Sometime the father will get around to bestowing this boon on his son — someday, but not now.

Assuming that a son has demonstrated his trustworthiness and is reasonably steady for his years, a father-and-son partnership may be entered into which will be no less advantageous for the father than the son.

It may do these things:

(a) provide additional management and responsible authority at a time when such added management must be secured in any event, whether through partnership or employment;

(b) reduce the work load of the father so that his health can be protected in his advancing years;

(c) provide for continuation of the business after the founder's retirement or death;

(d) enhance and preserve the value of the business and the senior partner's interest for estate purposes.

This last may be tremendously important, although many manufacturers, either as sole owners or as principals in a closely-held corporation, may consider this factor too late or not at all. Most smaller manufacturing businesses are only the projected shadows of their owners. The value of such a business can depreciate sharply — and often does — with the demise of a sole owner. Earnings may drop even more sharply because a large part of the earnings are in fact traceable to the superior personal services of the owner. This may be no less true even though most earnings are credited to profit on capital investment.

With a son as a partner, the continued operation of the business is assured. There is no shrinkage of the founder's estate due to a forced sale of the business, as might be the case in a sole proprietorship or closely-held corporation. The decedent's heirs, particularly his widow, can be assured of continuing income from the business; or, a buy-and-sell agreement, previously arranged by the partners, will assure a larger estate than would be the case in a sale made under unfavorable conditions.

Finally, the business is assured of competent continuing management during the first critical months after the death of its founder. Good will is kept and customers are retained. On the other hand, a son who is working in the business, but not as a partner, may have little interest and less incentive in managing the business, even on an interim basis pending its sale or liquidation. He may have few management skills because he has never needed to possess them. If the business is to be sold, his own future prospects may be of paramount importance to him. If the bulk of the estate passes to others, he may depart at this point to secure his own future.

Long before a father-and-son partnership is consummated, a son may be encouraged to work in the business during school vacations and Saturdays. This will expose him at an early age to the manufacturing processes and the business practices and policies. However, this should not be overdone lest a son develop an unreasoning distaste for the business which deprives him of many of the pleasures and joys which are youth's rightful inheritance. This indoctrination may occur over a long period of time and in progressive stages. Incidentally, such part-time earnings of a son will not usually disqualify him as a dependent for income tax purposes.

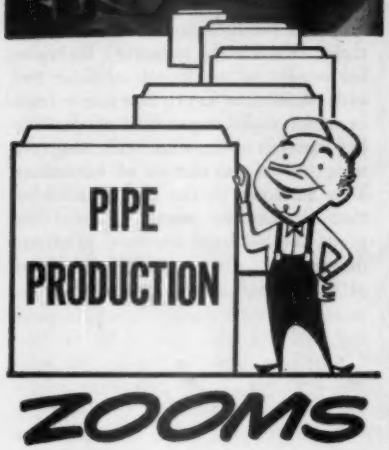
As preparation for a partnership, a son may be encouraged to take business subjects in school, rather than prematurely giving up school to work in the business. After high school, a year or two in business college may pay handsome dividends both for father and son, business-wise; or he may be encouraged to attend a university school of business administration. He may study accounting, advertising, selling, or other subjects having practical application in the business. Here too a son may be counted a dependent for tax purposes, provided the parent furnishes more than half of the support during his years of schooling.

Whether a son deserves a chance to become a partner with his father is a momentous decision. A father should attempt to arrive at that decision objectively. He should neither deprecate his son's potentialities nor fondly over-estimate them. If a partnership with an undeserving and unqualified son can be disastrous for a father, it may be no less fatal to fail to form such a partnership when a son deserves this recognition of his latent skills and ability and his loyalty.

■

ASTM Holds 59th Annual Meeting

With a record registered attendance of 2896, the American Society for Testing Materials concluded its 59th annual in Atlantic City on June 22. The apparatus exhibit held in conjunction with the meeting was also one of the largest ever held by the Society. At the week-long meeting, the Society held 32 technical sessions and almost 700 technical committee meetings. R. A. Schatzel, vice-president and director of engineering for the Rome Cable Corporation, was elected president of the society. Kenneth B. Woods of Purdue was named vice-president.



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When you put Cleveland form vibrators on the job.

- adjustable vibration force
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- easy to maintain, only one moving part
- wide range of sizes, air or electric

Write today for a complete catalog and price list.

Air or Electric

Portable or Permanent

Silent or Standard

THE CLEVELAND VIBRATOR COMPANY

2708 Clinton Ave. • Cleveland 13, Ohio

25th Anniversary

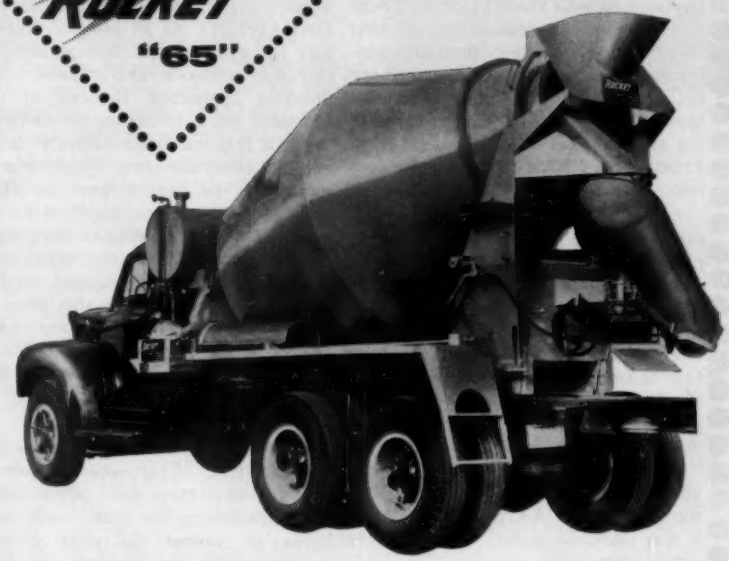
Combination WORKhorse and RACEhorse! that's

The new ROCKET "65"

Seldom do you find a piece of machinery that combines the strength, durability and dependability of a WORKhorse with the speed and mobility of a RACEhorse. But that's what ready-mix operators are saying about the new Rocket "65"—a versatile 6½ to 7 yard mixer. The Rocket is designed and engineered to operate for years at maximum efficiency, with surprisingly little maintenance. Every conceivable ease-of-operation feature, *plus* tremendous strength, has been *built in*.

After you've bought a Rocket, you'll agree that it is both the workhorse *and* racehorse of your fleet!

Also available in 3, 3½, 4, 4½, 5, 5½, 6 and 6½ yd. models.



ALL THESE FEATURES *at NO EXTRA COST!*

HYDRAULIC CHUTE CONTROL Is fully automatic. Controls grouped for easy access.

ALUMINUM EXTENSION CHUTE attaches to 36" fold-over addition to main chute. Total discharge chute: 12' 6".

ELECTRIC REVOLUTION COUNTER kit included; you can handle most specifications with one Rocket!

SPECIAL ALLOY, abrasion resisting steel used at all wear points.

UNOBSTRUCTED HOPPER, for rapid charging, no spilling or waste.

POSITIVE CHAIN DRIVE, flexible power, not affected by truck twist, road shock.

STANDARD INDUSTRIAL ENGINE, truck-type transmission. Repair parts readily available.

THREE-POINT SUSPENSION, one-piece cast steel precision machined ring.

DEMAND THE BADGE OF DEPENDABILITY

CONCRETE TRANSPORT MIXER CO.

MAIL THIS COUPON TODAY!

Gentlemen: Please rush full information, prices and terms on the following:

- ☐ New Rocket Revolving Drum Truck Mixer
- ☐ Hi-Lo Stationary Drum Mixer
- ☐ Batching Equipment ☐ Water Meters
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Darex Diary

by Henry L. Kennedy
Member, American Concrete Institute
Manager, Construction Products
Dewey & Almy Chemical Company

*"Hurricane-Tested" DARACONE

*New Uses for DARAWELD

WE HAVE always been proud of the excellent water repellency displayed by brick masonry after it has been properly treated with DARACONE. There are literally hundreds of installations that have attested to its premium performance. But I never expected to see the terrific forces of nature turned loose on a DARACONE-treated building such as was experienced in East Providence, Rhode Island, in the past two years.

Cabot, Cabot & Forbes built an office, warehouse and manufacturing plant for Dupont. As there was severe water penetration of the walls even during light rain storms, all the brick masonry was treated with DARACONE. Then along came Carol, the first of two severe hurricanes to strike the New England coast that year. Wind velocity reached 90 miles an hour — accompanied by torrential rains. Although the interior walls were inspected several times during the storm, they were dry. The DARACONE did what it was intended to do: it repelled the wind-driven water.

It wasn't too long before the building was again subjected to harsh treatment. Hurricane Edna — with 70 miles per hour winds — struck Rhode Island and deposited almost 6" of rainfall in three hours. Then during the summer of 1955, two more hurricanes—Connie and Diane — repeated the story, with the same high wind and terrific rainfall. In each case DARACONE's performance was the same: there was no masonry leakage.

To me, this is convincing evidence of the excellent job of water repellency that a premium silicone-base material like DARACONE can do for brick masonry.

I HAD an interesting talk the other day with one of our German consultants from Frankfurt, Germany. He told me about some of their interesting uses for DARAWELD. As an integral admixture for gypsum and lime plasters, it increases adhesion and improves the finishing properties. Because of the excellent water-resistance of DARAWELD, this use is particularly desirable in confined areas where warm, moist air or steam prevails. The amount they use is roughly 8 to 10 per cent of DARAWELD by weight of the plaster. When this amount is added, the internal cohesion of the plaster is much greater; also there is an improvement in the adhesion of the plaster to the brown or scratch coat. Water resistance of the plaster is improved, and bond of new plaster to old is substantially increased.

Here is another new application for DARAWELD. This same consultant told me that they quite often suffer excessive dusting due to the inadequate curing of concrete floors. Of course, we also have this situation in this country. They have used very successfully as a corrective, a one-coat application of DARAWELD which has been diluted one-part of DARAWELD to one-part of water. This means two gallons for one — a really economical coverage. We have tried several sections of our floors here at Cambridge, and it appears to be a good dust-preventive measure, resulting in a clean, dust-free floor at all times. After painting the DARAWELD on the floor, the surface takes on a slight sheen that is a decided improvement over the old surface. It was ready for foot-traffic in less than 48 hours.

DEWEY AND ALMY
CHEMICAL COMPANY
DIVISION OF W. R. GRACE & CO

Cambridge 40, Massachusetts; San Leandro, California; Montreal 32, Canada

Keep Those Records—

(*From page 40*)

paid certain government obligations or complied with certain laws and regulations. For example, in tax matters, a court will show scant sympathy for a taxpayer who cannot confirm his deductions. The court will take the position that this situation "is of his own making." Lack of records, or inadequate records, therefore is neither a defense nor a deterent to the assessment of an additional tax. Quite the contrary.

While each state in the union has a statute of limitation defining the period of time within which an action may be brought to enforce a legal right, this statute is not all inclusive in respect to the length of time records should be kept. Too many businessmen make a practice of destroying records coincident with the running out of the statute of limitation. This is done in the mistaken belief that the statute somehow or other gives blanket legal approval to record destruction after a specified period of time. Such is not the case.

■

New General Manager For Housing Center

Bernard E. Loshbough has been appointed general manager of the National Housing Center, Washington, D. C. The appointment represents another step in the Center's efforts to increase its service to the building industry. Mr. Loshbough will be in charge of an expanded program to bring various elements of the industry together in approaching common problems through technical roundtables, special demonstrations, and short courses.

■

Bror Nordberg Appointed Veep of Azbe Corporation

Azbe Corporation of St. Louis, a consulting engineering firm, has announced the appointment of Bror Nordberg as vice-president. Mr. Nordberg previously served for many years as editor of Rock Products Magazine.

LETTERS TO THE EDITOR

German Concrete Products

Sir:

Your readers might be interested in the following observations concerning the concrete products industry in Germany:

German manufacturers of concrete products expect stronger demand from all sectors of construction. Chief influences will be the comprehensive road building and repair program, the increased use of precast concrete in residential construction, and new contracts for water supply facilities for the growing cities. It is expected that additional activity in these lines will increase the annual business of the concrete industry by about $50 million in the next two or three years. By 1959 it is believed that total sales will be at the rate of $240 million annually.

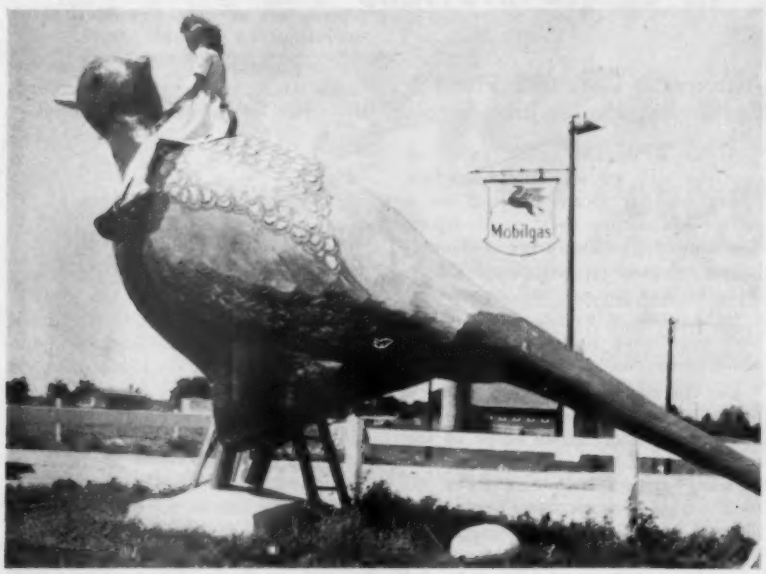
There is a great renewal of interest in concrete roof tile. This branch of the industry hit a postwar peak of 23 billion units in 1951, but sales fell to a low point of about 9 billion units in 1954. Last year's output was over 14 billion and there are indications of a further increase this year.

Road and underground construction lead in concrete consumption. Last year they took 3.25 million tons, an increase of 24 per cent over 1954. Cable casings are almost exclusively of precast concrete. Almost 2 billion precast rail ties were produced last year, an increase of 13 per cent from the previous year.

The German concrete products industry continues to absorb the increased cost of wages and materials by means of large-scale production. Productive facilities are still not fully utilized, however, because the climate seriously restricts winter work. An attempt is being made to maintain full employment by making and stockpiling larger building parts through the winter months.

Nearly 80 per cent of the industry belongs to the Association for Quality Protection of Concrete Products, an organization whose main function is to set up quality standards. Negotiations now in progress on the German federal level seek to make mandatory the use of products guaranteed by the association for all German building using concrete.

—M.S.



Concrete Egg Factory

● The world's largest pheasant, made of five tons of concrete, is a traffic stopper at the service station of W. A. Walters of Kenton, Mississippi. Sixteen feet long and nine feet high, a saddle on its top is reached by a ladder to provide delighted youngsters with a view of the surrounding scenic area. A strategically located concrete egg adds a note of realism to the brightly-painted bird.

Darex
products at work

DAREX AEA
helps shorten time, distance across Bay State

Spanning hills, valleys and rivers of the Bay State with multiple lanes of broad, straight highway, the $293,000,000 Massachusetts Turnpike is moving swiftly toward completion under the joint effort of over a score of contractors.

Greatest road project ever undertaken in Massachusetts, the 123-mile East-West highway gives further evidence of DAREX AEA effectiveness; for in such important sections as the West Springfield-Chicopee bridge pictured above, DAREX air entraining agent protects concrete from the stern rigors of New England winter.

DAREX AEA serves a valuable on-the-job purpose for contractors, too: air entrainment of concrete aids measurably in easier placement and faster finishing.

Wherever the job, in whatever climate, DAREX AEA does double duty: first, by easing the task of the contractor; second, by giving taxpayers full value in durability and trouble-free service.

Other Dewey and Almy Products for the Concrete Industry

DARACONE—silicone-type water repellent

DARALITE—air-entraining agent for use with lightweight aggregates

DARASEAL—premium quality concrete curing compound

DARAWELD—for bonding new concrete to old

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DEWEY AND ALMY CHEMICAL COMPANY
DIVISION OF W. R. GRACE & CO.

Cambridge 40, Massachusetts

Some Practical Tips For Boiler Operation

THE BOILER is one of the most important pieces of equipment in a modern concrete plant. It is the heart of any curing system, making it possible to cure block and other concrete products properly and at accelerated rates. Boilers also make it possible for ready-mix plants to operate safely during severe winter weather. It is therefore important that the installation, care and maintenance of boilers be properly understood by the concrete plant operator.

Here are a few fundamental rules which should be followed:

■ **Wash out all grease and oil from a new boiler to prevent damage from overloading. Oil and grease act as an insulator and therefore as a non-conductor of heat, and if not removed can possibly cause overheating of the tubes and firebox plates. Usually a solution of caustic soda will eliminate all the grease and oil within a boiler (1 pound of caustic soda for each 5 horsepower of boiler rating.)**

■ **Fire up a new boiler slowly. This will eliminate undue stresses due to thermal expansion. If a refractory chamber is in the boiler, it will allow the chamber to dry out slowly and properly.**

■ **Never cool a furnace rapidly because of undue stresses caused by thermal contraction.**

■ **Make sure that all joints and cracks in the boiler and boiler settings are tight. Leakage can cause a poor combustion efficiency.**

■ **Keep all flue passages clean. Soot is a good insulator.**

■ **See that a positive supply of air is always available to the boiler room. The oxygen in the air is always necessary to maintain good combustion efficiency.**

■ **Check the height of the water line and water column. The water column should be set so that the lowest visible portion of the water column is always 2 inches above the fusible plug in the boiler. Make sure that all blow-off valves, water column drain, gauge cocks and feed valves are in good working condition.**

■ **Safe and proper operation of a boiler depends upon keeping water in the boiler as constantly at a proper level as conditions permit. Never depend *entirely* upon automatic controls for feed water regulation. Check the operation of the controls daily and blow down the float chambers of all automatic controls at least once a day.**

■ **Low water in a boiler is always dangerous. If the water level is below the water glass, stop the supply of fuel and air. Allow the boiler to cool down and determine the cause for low water and repair. Check the boiler for possible defects as a result of overheating.**

■ **Foaming and priming may occur in a boiler and cause a considerable amount of water to pass into the steam main. If this happens, look for dirty feed water, overdose of boiler compounds, too high a water level in the boiler. Find the cause and repair at once, as serious damage can result to the boiler.**

■ **In curing block with live steam, the boiler for all practical purposes operates on 100 per cent make up water. Since all water contains varying amounts of minerals in solution, scale formation within the boiler results. Corrective measures must be taken to eliminate the scale or serious injury to the boiler will result, not to say anything about poor operating efficiency. The elimination of the scale depends upon its mineral analysis and should be done under the direction of an experienced boiler water chemist.**

■

Automatic Concrete Plant For Power House Job

About a million cubic yards of concrete will go into the Canadian powerhouse at Cornwall, and on a rough calculation that could represent around 6 million bags of cement.

It's a mammoth quantity for handling on any project and, because of a tight work schedule, the problem had significant importance for the powerhouse contractor.

But the company has got round it by utilizing a method of operation in keeping with the broad scope of the project. Operating now is a pipe-blowing system that can move 60 tons of cement an hour—equal to about 1,440 bags—from storage silos to two main plant silos near the powerhouse site about a quarter of a mile away.

From the cars, the cement is unloaded and carried by screw and bucket conveyors to storage silos. When the blowing operation starts, the cement in the silo drops into a pipe below where another screw conveyor pushes it to the point where a line from a 200 h.p. water-cooled air compressor comes in.

Then, at from 35 to 40 psi pressure, the cement is blown through the 1,800-foot long, 6-inch steel pipe under the new diversion canal and the existing Cornwall Canal, and climbs 50 feet on its way to the main plant silos. As required, the cement is brought into the mixing plant by bucket conveyor.

Special precautions have been taken to prevent damage from a build-up of the cement. If that occurs, the operator immediately cuts off the feed of cement into the line and gives the full air pressure opportunity to clear it.

The huge batching and mixing plant on the north shore of the river is a landmark above the powerhouse excavation.

The plant is completely automatic and has a capacity of 200 cubic yards an hour. It is estimated that 2,000 cubic yards of concrete on the average will be discharged out of it every workday for the next two and a half years for its present job.

These are some of its unique features:

—Provides accurate, automatic weight batching, and compensates for variations in sand and fine gravel moisture content.

—Gives instantaneous mix changes with a mix selector, has interlocking operations to prevent errors.

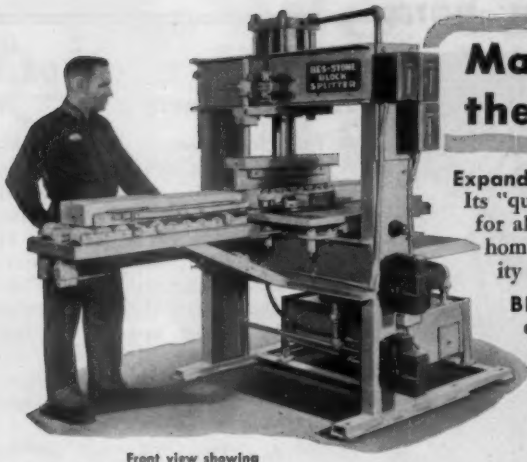
—All controls are centered on one board and complete detailed records are given of every batch poured.

■

RILEM Publishes Symposium Proceedings

The *Proceedings* of the RILEM (Reunion Internationale des Laboratoires d 'Essais et de Recherches sur les Materiaux et les Constructions) symposium on winter concreting held this February in Copenhagen, can be ordered now. The book contains reprints of 32 original contributions from specialists in 12 different countries, reproductions of addresses during the discussions, and a closing chapter analysing the most important conclusions.

Orders for the *Proceedings* can be sent to The Organizing Secretary, RILEM Symposium 1956, The Danish National Institute of Building Research, Borgergade 20, Copenhagen K, Denmark.

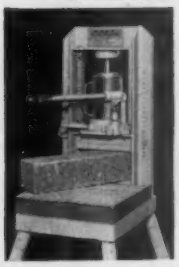


Front view showing operator feeding block into BES-STONE Block Splitter.

Make this your BEST year with the BES-STONE Block Splitter

Expand Your Opportunities — Cash in on the Split Block demand. Its "quarried stone" character pleases owners. You'll find it ideal for all structures, large or small . . . commercial, institutional or home construction. BES-STONE challenges the creative ability of both architects and builders.

BES-STONE Splitters — Automatic, powerful, hydraulic operation . . . up to 960 Split Block per hour. Straight line cuts . . . No cull block. Easily adjustable for splitting various block heights. Block is placed under knife, automatically. And the finished Split Block is automatically removed from under the splitting knife by the incoming block. Quiet, safe operation.



PONY BLOCK TRIMMER
Indispensable tool for on the job. Trims off the end of any block up to 8" by hand operated, hydraulic pump. Capacity 12 tons. Legs easily removable. Compact. Lightweight. Easily portable.

Fast, Accurate
Profitable Producer of 960 Split Block per Hour!

There's big money for you in attractive, permanently colorful BES-STONE Split Block. It complements and increases sales of standard stripper block. Get all the facts. Write for BES-STONE Bulletins 95A and 100.

Note the natural beauty of BES-STONE. No maintenance, no painting, no peeling off.

BES-STONE *the Split Block with Character*

BESSER COMPANY • Complete Equipment for Concrete Block Plants • Alpena, Michigan, U. S. A.

Lay Brick and Concrete Blocks at 20° above zero

Forrer's *Accelerator* for Concrete and Mortar

Now, with Forrer's new Accelerator, for Mortar and Concrete, you can lay blocks safely down to 20°F. For, this newly improved Accelerator actually lowers the freezing point of the water in the mix and speeds up setting time. Forrer's Accelerator increases strength and workability; brick mortar becomes easier to work; concrete easier to pour. Result: extra jobs and no delays in below freezing weather.

Solves Freezing Weather Worries

Solution is available in handy 1, 5, 30 and 55 gallon drums. Rust inhibitor added prevents it from affecting reinforcing steel or tools.

DEALER'S WANTED!

Attention Concrete Block manufacturers— For extra sales — sell Forrer's Accelerator. Stock up now for cold weather.

— Attractive Territories available for Distributors —

Forrer's
PRODUCTS FOR MASONRY
SINCE 1926

FORRER'S — Division of SPRAY-O-BOND CO.
2225 N. Humboldt Ave., Milwaukee 12, Wis.

Award Winners

● These four Clemson College architectural students won top honors in the annual Solite Competition Award contest, sponsored by the Carolina Solite Corporation. They are: left to right, John E. Pinckney, 2nd prize; John A. Davenport, 1st prize; Milton White and Edgar C. Wiggins, 3rd prize. The contest, open to 4th year architectural students, assigned the problem of designing recreational facilities and pavilion for a mountain resort. Competitors were guided by actual conditions and requirements.

Switchmobile

● Le Tourneau-Westinghouse has developed this rubber-tired diesel switch engine which need not stick to the tracks. It can travel on city streets, and can pull 8 loaded freight cars along the rails. The Switchmobile has all-wheel drive and it can push or pull with equal power and speed in either direction. It was made for the Pennsylvania railroad.

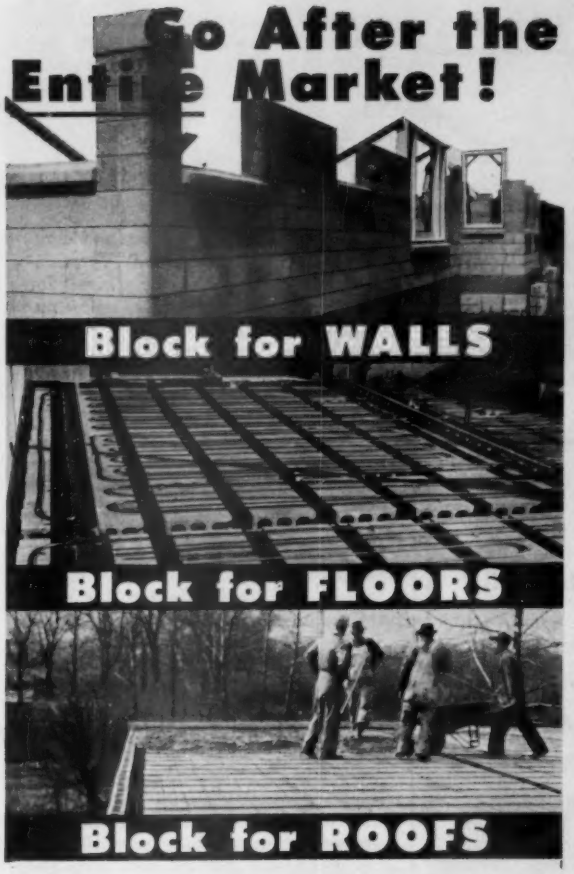
Job Site Batcher

● Requiring no foundations or electrical wiring, this Noble-Mobile batching plant does its work at the job site. Here it is supplying concrete for a housing project in Dallas for Wamix.

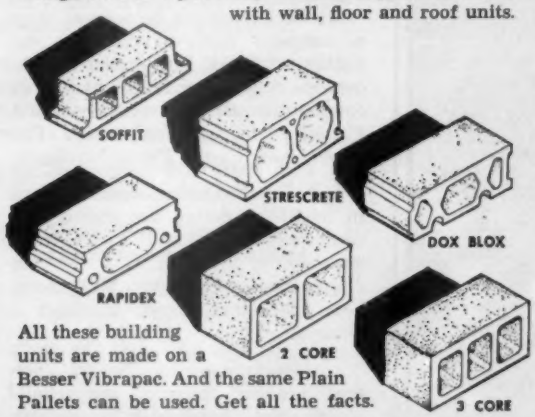
Mixer Plant in Southwest

● The T. L. Smith Company of Milwaukee opened its new plant in Lufkin, Texas, this May. Built to produce truck mixers, agitators, and stationary and portable concrete mixers, it is the first such plant to be located in the southwest.

Go After the Entire Market!



Fire-safe walls? Of course! But floors and roofs should be fire-safe, too. Walls are full of openings (windows, doors, etc.), while floors and roofs are relatively solid. Actually, TWICE the volume of block is required for floors and roofs than is required for walls. So why not go after this profitable market? Supply customers with wall, floor and roof units.



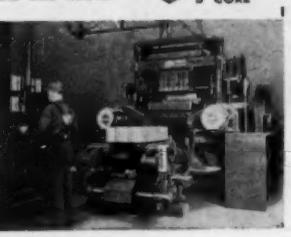
All these building units are made on a Besser Vibrapac. And the same Plain Pallets can be used. Get all the facts.

Write for Bulletin

BESSER COMPANY

ALPENA, MICHIGAN, U. S. A.

Complete Equipment for Concrete Block Plants



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Write Dept. 6P today for complete information, specifications, prices and the name of the Dur-O-wal distributor nearest you.

Dur-O-wal Div., Cedar Rapids Block Co., **CEDAR RAPIDS, IA.** Dur-O-wal Prod., Inc., Box 628, **SYRACUSE, N.Y.** Dur-O-wal of Ill., 119 N. River St., **AURORA, ILL.** Dur-O-wal Prod. of Ala., Inc., Box 5446, **BIRMINGHAM, ALA.** Dur-O-wal Prod., Inc., 4500 E. Lombard St., **BALTIMORE, MD.** Dur-O-wal Div., Frontier Mfg. Co., Box 49, **PHOENIX, ARIZ.** Dur-O-wal, Inc., 165 Utah St., **TOLEDO, OHIO**

NEW LITERATURE

Deaerator—Publication 4653 describes the advantages of cold water deaerators and their principles of operation. *Cochrane Corporation*, 17th Street below Allegheny, Philadelphia 32, Pennsylvania.

Motor Drives—Motor drives with positive pulley adjustment, ranging from ½ to 25 hp, is the subject of Bulletin No. 1610-B1 P. It contains complete information on how to select variable speed drives to meet any specialized requirement, as well as describing engineering features, remote controls, separate motor drive, and other Worthington mechanical power transmission products. *Worthington Corporation*, Advertising & Sales Promotion Department, Harrison, New Jersey.

Controls—Condensed catalog and price list B43-1 introduces Electronik special class 14 line of strip chart, circular chart and circular scale instruments. It also includes specifications and prices of vane-type millivoltmeter controllers, thermocouples, radiamatic radiation detectors, remote bulb thermometer controllers, flame failure safeguards, limit controls, electric and pneumatic valves. *Minneapolis-Honeywell Regulator Company*, Industrial Division, Wayne and Windrim Avenues, Philadelphia 44, Pennslyvania.

Vermiculite—A compact and comprehensive booklet entitled "Vermiculite Fire Resistance Ratings for Plaster, Acoustical Plastic, and Concrete" contains 38 drawings that show fireproofing details for both concrete and steel roof and floor assemblies, columns, beams, girders and trusses, panel or spandrel walls, and solid plaster partitions. *Vermiculite Institute*, 208 South LaSalle Street, Chicago 4, Illinois.

Bergen Catalog—A supplement to the Bergen "Better Equipment" book describes many new items of equipment added to the Bergen line since the publication of the original book. *Bergen Machine & Tool Company, Inc.*, 189 Frankline Avenue, Nutley, New Jersey.

Bonding Agent—Circular No. 48 describes Thorobond, a liquid bonding agent for improving adhesion between old and new concrete, plaster, and many other materials. Its characteristics, methods of application, coverage and typical uses are also given. *Standard Dry Wall Products, Inc.*, New Eagle, Pennsylvania.

Testing—A circular that describes the seven variables in the manufacture of concrete block and indicates the value of a compression tester in controlling them can be ordered from a company that manufactures the testing machines. It is directed to the consumer as a service of the block company and may be imprinted. *Forney's Incorporated*, 209 Elm Street, New Castle, Pennsylvania.

Lift Truck Design—Latest trends in lift truck design are shown in a twelve-page brochure. It illustrates attachments available with the machines. *Hyster Company*, 2902 North East Clackamas Street, Portland 8, Oregon.

Hardsurfacing—To protect new machines and maintain and rebuild older ones, hardsurfacing is suggested in a brochure which presents case studies of its use in cement and aggregate plants. Though preventive maintenance is emphasized, the importance of hardsurfacing for repair is also stressed. *Rankin Manufacturing Company*, Department R-2, 616 South Marengo Avenue, Alhambra, California.

Make More Money With
RINSON FORK LIFT TRUCKS
- - - Here's 7 Reasons Why

A RINSON IS READY TO ROLL . . . Its movable muscles are ready to use wherever needed. Note the built in tow bar, foldup forks, tie-in braking and lights. Distance is no problem; you deliver quickly with Rinson Fork-Lift Trucks.

1—**You Can Take It With You.** Tow at highway speeds to the job.
2—**Spot Load Anywhere.** Climb curbs, traverse rough terrain. Put it where the customer wants it.
3—**Save Labor Costs.** Saves 5 to 8 times the man hours. Your trucks have less idle time; deliver more pay loads with 1 man and a Rinson.
4—**Little Truck Does Big Work.** Maneuvers in tight spaces. A Rinson NF-4 will lift 4,000 pounds, carry and elevate loads to 9 feet.
5—**Low-Cost Maintenance.** Uses standard Ford truck parts. No waiting for factory delivery. Just call your Ford dealer.
6—**Get More Business.** Spot loads where needed with no extra labor. Customers like Rinson deliveries.
7—**Increase Profits.** A Rinson quickly earns more than it costs. Needed all around your plant. Competition compels you to own a RINSON now. It saves time, makes money.

Prices Start As Low As $3665.00

Test RINSON . . . You'll Buy RINSON!

Decide which of the 5 Rinson Models will make you the most money! ASK FOR COMPLETE DETAILS TODAY!

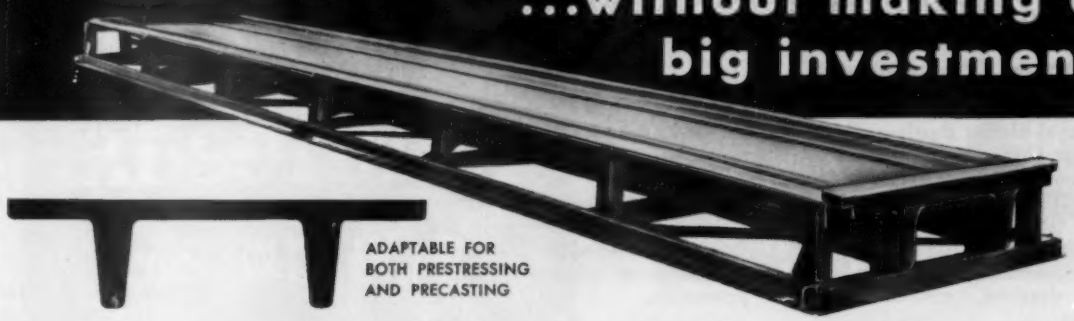
RINSON
FORK LIFT TRUCKS

C. Rinkin & H. Olson, Rinson Fork Lift Trucks
725 E. Huntington Drive, Monrovia 2, Calif.

Send free illustrated brochure on RINSON Fork Lift Trucks.

NAME.....TITLE.....
COMPANY.....
ADDRESS.....
CITY.....STATE.....

Get Into Profitable Precast Business ...without making a big investment



ADAPTABLE FOR BOTH PRESTRESSING AND PRECASTING

It's not necessary to invest money in concrete beds, expensive equipment and plant facilities to manufacture prestressed double tee slabs. A big sales potential is for span ranges of 20 to 40 feet, for which prestressing is not needed—for which precast members are most advantageous.

Low-cost, portable Atlas Cambered Steel Forms enable you to quickly and simply precast your slabs with lightweight concrete. A small investment puts you in a business with a tremendous market.

Get the story.

Consult Us Before Buying Forms for Prestressed or Precast Concrete

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Manufacturers of Forms for Prestressed and Precast Concrete

20 Vesey Street New York 7, N. Y.

BULL'S-EYE! for Record Block Production without Sacrifice of Quality

OSWALT

The New OSWALT Block Machine has made a big "hit" with producers wherever installed.

It combines all of the advanced operating features which have been developed by Oswalt engineers . . and proved in practice!

(1) Improved Vibration and Production Speed-Up

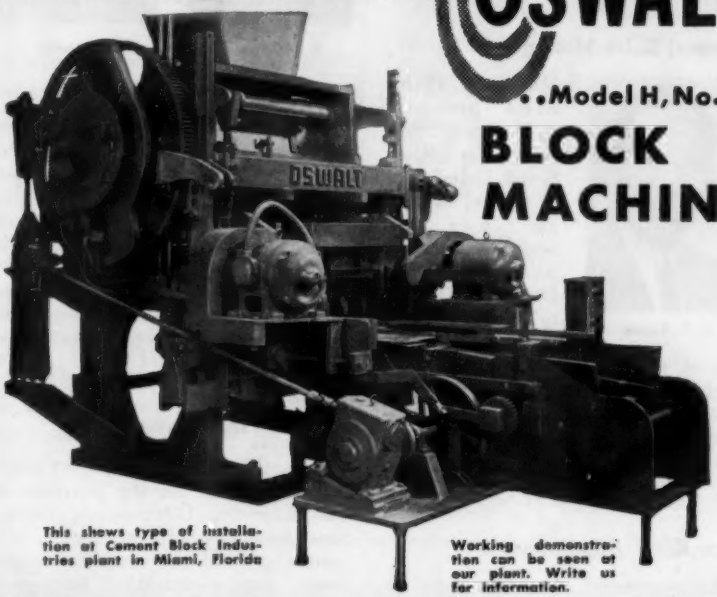
(2) Shock-Free Ejector and Front-End Pallet Feeder

(3) New Simplified Height and Density Control

(4) Extra Strength and Stability with Smooth, Relaxed Operation

Write for new illustrated Brochure of Model H OSWALT Block Machine.

Today's most modern design block machine in its field.



This shows type of installation at Cement Block Industries plant in Miami, Florida

Working demonstration can be seen at our plant. Write us for information.

..Model H, No.55 BLOCK MACHINE

OSWALT ENGINEERING SERVICE CORP.

1335 Circle Ave., Forest Park, Ill. Phones: EStebrook 8-4664 (Chicago) FOrest 6-2798 (Suburban)

MANUFACTURERS' NOTES

Huron Portland Cement Announces Appointments

Lee C. Hamilton, divisional sales manager of Huron Portland Cement Company, has been appointed assistant general sales manager to succeed D. T. Meyers who has retired. Ralph F. Dickson, assistant divisional sales manager, has been named divisional sales manager, Ohio and Wisconsin districts, succeeding Mr. Hamilton.

Koehring Appointment

I. L. Gebhard

The appointment of Irvin L. Gebhard as general manager of Koehring Company of California was announced recently by Koehring president, Julien R. Steelman. In his new post, Mr. Gebhard will maintain contact with all Koehring products distributors as well as those handling the products of three Koehring subsidiaries in the states of Washington, Idaho, Oregon and Montana.

General Sales Manager

D. J. Davis

Milton G. Peck, vice president and director of sales for Gar Wood Industries, Wayne, Michigan, has announced the appointment of David J. Davis to the newly created position of general sales manager, construction machinery. He will direct construction machinery sales activities from Findlay, Ohio, home of Gar Wood's construction machinery division.

Blaw-Knox Appointments

Announcement of a new slate of key sales officers for the Construction Equipment Division, Blaw-Knox Company, Mattoon, Illinois, was made recently by R. P. McKenrick, vice president and general manager of the division. L. H. DeVilling has been named sales manager of the division. Raymond E. Hoppenrath has been promoted from sales engineer to product manager-bins, batchers and buckets. H. C. Peters has been named product manager-truck mixers. George Moritz has been named assistant to the sales manager, in charge of advertising and sales promotion.

L. H. DeVilling

R. E. Hoppenrath

H. C. Peters

G. Moritz

Silicone Paint Patented

Siliphane Corporation of America has just received a patent for a cement powder paint which incorporates silicone. The paint, known as Silitex, S. F., is claimed to penetrate masonry pores, shedding water without sealing the surface. It has held up without peeling or cracking through four years of vigorous testing. Distribution is being handled in the United States and Canada by the Upson Company.

Koehring Distributor

Recently appointed Koehring products distributor for the province of Saskatchewan, Construction Equipment Company, Ltd. of Regina, will handle sales of the complete line of heavy duty construction equipment manufactured by C. S. Johnson, Kwik-Mix and Parsons Company. All three firms are subsidiaries of the Koehring Company of Milwaukee.

Appoints Chief Engineer

Harold Ramsey, general manager and vice president of the Lith-I-Bar Company, Holland, Michigan, has announced the appointment of Hugh Aughinbaugh as chief engineer. Mr. Aughinbaugh comes to the company with a background of 25 years experience in product development and styling, testing, process engineering, tool engineering, and designing.

Sales Engineer

W. R. Hazard

Walter R. Hazard has been appointed to the New York sales staff of the construction equipment division of Blaw-Knox Company, Mattoon, Illinois. As a sales engineer for the company's road building package, Mr. Hazard will service New England distributors and contractors.

Expansion Progress Planned

LeTourneau-Westinghouse Company of Peoria has announced a $9 million building and tooling program, which will include a new factory at Peoria and expanded operations at Toccoa, Georgia, and Indianapolis. The new plant, adjacent to an older one, is to be completed next year. The company, which produces earthmoving and material handling equipment, expects the program to more than double its productive capacity.

Research Manager

J. W. Maxwell

Herle H. Holden, vice president of Construction Machinery Company, Waterloo, Iowa, has announced the appointment of James W. Maxwell as manager of the company's newly created research & development department. His duties will entail all phases of the research and development of new products allied to the lines of equipment that the company now manufactures.

IT'S Sound-Absorbing AS WELL AS...

★ Lightweight
★ Durable
★ Firesafe
★ Attractive
★ Strong
★ Nailable
★ Of High Thermal Insulation Value
★ An Excellent Plaster Bond

CELOCRETE
LIGHTWEIGHT AGGREGATE

No wonder Celocrete Lightweight Aggregate is being used by more and more leading builders and manufacturers of concrete products. Its big construction advantages and economies make Celocrete the preferred aggregate for masonry units, pre-cast building panels, soffit tile, monolithic floors and roof fill, and many other uses.

Celocrete Lightweight Aggregate is made from expanded slag by a process licensed *only* by the Celotex Corporation. This exclusive method honeycombs every particle of Celocrete aggregate with tiny air cells—resulting in lightweight plus *built-in* insulation and sound-absorption value. For complete information write The Celotex Corporation, 120 S. LaSalle Street, Chicago 3, Illinois.

Another Famous CELOTEX *Product*

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LIGHTWEIGHT AGGREGATE

The Celotex Corporation, 120 S. LaSalle Street, Chicago 3, Illinois

High Early Strength

Cold Weather Safety

Higher Ultimate Strength

Get All 3 By Adding Solvay Calcium Chloride To Cold Weather Concrete

You can offset the strength and time losses resulting from temperatures of 50°F. or lower *and gain in ultimate strength* by adding Solvay Calcium Chloride to your concrete mix.

Speed finishing, remove forms earlier, save 2 — 4 days operating time. Get all the facts and figures in the booklet entitled, "The Effects of Calcium Chloride on Portland Cement".

NEW, 25-LB. BAG

Easy to Handle
Provides Accurate Measure

SOLVAY

GET THE COMPLETE STORY
GET FREE BOOKLETS NOW
MAIL COUPON TODAY

Allied Chemical

SOLVAY PROCESS DIVISION
ALLIED CHEMICAL & DYE CORPORATION
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Please send me WITHOUT OBLIGATION OR COST your booklet:

☐ "When the temperature drops BELOW 50°F., do you know what happens to CONCRETE?"

☐ "The Effects of Calcium Chloride on Portland Cement."

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MANUFACTURERS' NOTES

W. J. Koehring Succumbs

Death has claimed William J. Koehring, 83, last surviving founder of the Koehring Company, Milwaukee, Wisconsin. Mr. Koehring served as president of the firm from its founding in 1906 until 1940 when he became chairman of the board. He retired from that position in 1952.

Division Manager

A. J. Cox

Blaw-Knox Company, Pittsburgh, Pennsylvania, has announced the appointment of A. J. Cox as division manager of the company's construction equipment division at Mattoon, Illinois. Mr. Cox will have charge of all activities except sales.

Worthington Election

W. H. Feldmann

Walther H. Feldmann, executive vice president of Worthington Corporation has been elected a member of the board of directors, according to an announcement by Hobart C. Ramsey, Chairman. Mr. Feldmann has been associated with the company since 1944, and has been executive vice president since January 1955.

Appoints Manager

W. R. Snider

G. F. DeCoursin, vice president-sales for the Four Wheel Drive Auto Company, Clintonville, Wisconsin, has announced the appointment of Warren R. Snider as manager of ready-mix and logging markets. Mr. Snider has been with the company for 13 years.

New Whiteman Plant

The Whiteman Manufacturing Company recently completed a half-million dollar plant at Pacoima, California. The first unit of the plant covers 5 acres and has a floor area of 52,000 square feet. The company manufactures concrete truck mixers, power buggies, finishing machines, vibrators, and screening machines.

Westinghouse Distributor

Taylor Corporation, Providence, Rhode Island, has been appointed a Westinghouse transit mixer division of LeTourneau-Westinghouse Company, Indianapolis, Indiana. The territory covered includes the states of Maine, New Hampshire, Vermont, and Rhode Island.

White Promotions

Two promotions have been made in the national sales staff of the White Motor Company as part of an expansion of truck merchandising activities of the company, according to an announcement by P. E. Tobin, vice president — sales. Roy A. Fryer,

R. A. Fryer

D. W. Sheehan

assistant sales promotion and advertising manager, has been named advertising manager, and David W. Sheehan, assistant to the vice president — sales, has been named sales promotion manager. Mr. Fryer has been associated with the company in merchandising positions since 1943 and Mr. Sheehan has been on the national sales staff for two years.

Service Manager

John H. Sproule has been appointed service manager of the construction machinery division of the Chain Belt Company, according to an announcement by W. C. Messinger, sales manager. He was a field service supervisor prior to his new appointment.

Flexible Retirement Program Urged

The Occupational Health Institute has come out with an interesting pamphlet on the question of Chronological versus Physiological Aging in Industry. It touches on the increase in the span of life since 1900 and the problems this brings to business.

The Institute suggests that a change of thinking in industry and the community is needed in order to make full use of the additional years alloted to workers, and points out that an arbitrary retirement age no longer serves the best interests of the employer or the employed. It offers a plan of flexible retirement based on more thorough and frequent health examinations, and pledges the cooperation of the Industrial Medical Association.

■

Bureau of Standards To Relocate

A tract of approximately 550 acres of land near Gaithersburg, Maryland, has been selected for relocation of the Washington laboratories of the National Bureau of Standards. The move will permit the Bureau to plan new buildings to replace present research facilities, which over the past 50 years have become inadequate for current needs. Transfer of operations to the new location is expected to be completed in about five years.

The new site will enable the Bureau to plan for a more up-to-date plant consistent with its continually increasing responsibilities. In addition to its Washington laboratories, the Bureau maintains a major research center in Boulder, Colorado, and 20 widely scattered field stations.

■

Named Chief Engineer

William C. Green has been named chief of the engineering department of Texcrete Structural Products Company, an affiliate of Texas Industries, Inc., Dallas. Earlier he was with the Industrial Bureau of Standards handling research on structural properties of lightweight concrete aggregates.

Texcrete Structural Products Company produces precast concrete structural elements made with Haydite lightweight aggregate.

NOW YOU GET THE BEST FOR FAR LESS!

Forrer's XL-100

Powdered

Concrete Plasticizer!

Will Not Gum Up!
Guaranteed
"FREE-FLOWING"

Costs only ¼c per bag of cement

Cut your plasticizer costs to the bone with XL-100 dry powder. It weighs less — goes farther and does a better job. New process brings you a plasticizer that acts faster, takes 1/3 the amount (by weight) and does a superior job. Concrete blocks are shades whiter, denser and outside surfaces have smoother texture. Increase contractor, builder satisfaction — deliver a better block for less than 1/4c per bag of cement. Investigate Forrer's XL-100 today!

Forrer's
PRODUCTS FOR MASONRY
SINCE 1926

COMPARE!
SEE THE AMAZING DIFFERENCE!
Forrer's XL-100 is a dry hydrated powder with wetting and dispensing agents. It's easy to use and economical too — costs but ¼c per bag. Free sample on request

Division of SPRAY-O-BOND CO., 2225 N. Humboldt Ave., Milwaukee 12, Wisc.

Tractor-Powered Mixer

THIS tractor-mounted Redi-Mixer is operated and transported entirely by tractor power. No wheels or trailer needed, it rides suspended above ground at the rear of a tractor and is easily mounted or dismounted on standard 3-point hitch tractors in less than 5 minutes. The entire unit is raised and lowered for loading and dumping by the tractor's hydraulic equipment. A choice of either hydraulic or manual bowl-tilt models is offered. *R. L. Frohring Machine Company,* Newbury, Ohio.

Power Axle Trailer

WITH mixer trailer axles powered for rugged off road use, this unit gives tractive effort on 16 of its 18 tires, or almost 90 per cent of gross weight on traction axles. It can be jacknifed, and for high maneuverability, the tractor has a much shorter wheelbase than most ready mix carriers. The tubular frame is also used for a water tank and hydraulic oil reservoir. Trailer axles are controlled from the cab and can go forward or backward with five different ratios available. Eighty-eight horsepower can be transmitted to the rear axles at a variety of speeds and torque. *Concrete Controls Corporation,* 1012 East Geneva Road, Wheaton, Illinois.

Highway Divider Mold

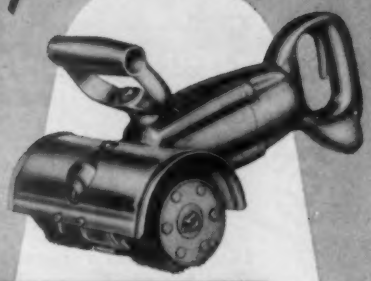
STATE-approved highway dividers, popularly known as turtles, can be made in this aluminum alloy mold. The dividers are 29⅜ by 12¼ by 4⅜ inches, and pins are included to produce the proper holes for security. The molds are said to be rugged, light weight and easy to fill, strip and clean. This type of divider is coming into use in many places throughout the country. *R. L. Spillman Company,* 1535 Frebis Avenue, Columbus, Ohio.

All-Wheel Drive Truck

DESIGNED for year 'round use, this all-wheel drive truck powered by gasoline or diesel engine, has engine cantilevered over the front axle for better weight distribution. It has an 8½-cubic-yard gravel dump body and carries a payload of 18,000 pounds on the front axle to conform with maximum load limits in most states. It is built for mounting an underbody blade for road grading work, or a large sander body with the underbody blade for winter road maintenance and ice control. A short wheelbase of 144 inches and power steering assures maneuverability and handling ease. *Oshkosh Motor Truck, Inc.* Oshkosh, Wisconsin.

Chip Away

SCALE
RUST
PAINT



AURAND
CLEANING TOOLS
ELECTRIC OR PNEUMATIC MODELS

Surfaces are cleaned quickly with AURAND on the job. Hardened steel cutters zip away stubborn accumulations from iron, steel, brick, concrete. Adjustable depth shoe protects surface . . . assures uniform cleaning. No special skill required. Renewable cutter heads. Two sizes in both electric and pneumatic models. Lightweight.

Write Dept. 15 for complete details

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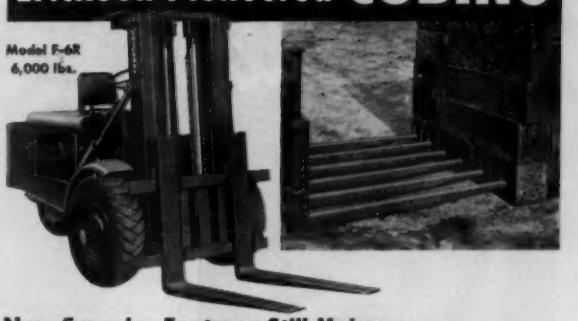
Erickson Pioneered CUBING



New Superior Features Still Make

Erickson F-6R THE IDEAL TRUCK FOR THE CONCRETE INDUSTRY

Erickson Fork Trucks have a proven 30-year record for low-cost handling of concrete block cubes in the yard — stock-piling, loading and unloading delivery trucks.

New twin cylinder mast construction assures full operator vision • new 12" clutch with Timken combination drive axle and transmission • new high H. P. engine, easily accessible with tip-up hood. Large 8:25x15 tires provide easiest rolling and surest traction (*all* tires interchangeable.) Available with forged steel flat forks or Jalloy No. 1 cubing forks. *WRITE FOR LITERATURE!*

"THE WORKHORSE OF LIFT TRUCKS"

ERICKSON
POWER LIFT TRUCKS, INC.
221 St. Anthony Blvd. N. E.
Minneapolis 18, Minn.

NOW!

FOOL-PROOF, CONVENIENT HANDLING OF AIR-ENTRAINING AGENTS

GENERAL CLOSED SYSTEM
POSITIVE DISPLACEMENT
FLUID DISPENSER

positively eliminates

- ★ SCUMMING
- ★ CONGEALING
- ★ 'MAN-HANDLING' OF DRUMS

WILL LAST A LIFETIME

PAVER MODEL ALSO AVAILABLE

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Measures and moves it from drum to mixer!

Closed, positive-displacement pressure system moves air entraining agent from ground level drum to the General Dispenser in batching tower. Liquid never exposed to air until ejected into batch as it is *accurately* metered. Pays for itself many times. Write for complete information and report of first enthusiastic users.

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General EQUIPMENT COMPANY
OWATONNA, MINNESOTA

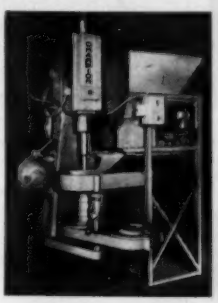
For 50 Years

Dunn Machines Have Paced the Drain Tile Industry

T-5

They have pioneered in the production of high quality tile—strong, dense, and truly round. They have influenced the greater use of concrete tile by lowered prices and easier availability. They have encouraged its manufacturing as a community enterprise.

Efficient, compact, low-investment Champion plants, using local aggregates and local labor, pare production costs to the minimum. Effect tremendous economies in freight, distribution and breakage. Net results: lower costs to consumers, leading to increased sales volumes, and a generous margin of income for the manufacturer.



Investigate — today — the most profitable angle of the concrete products industry. Write for a copy of the Champion catalog.

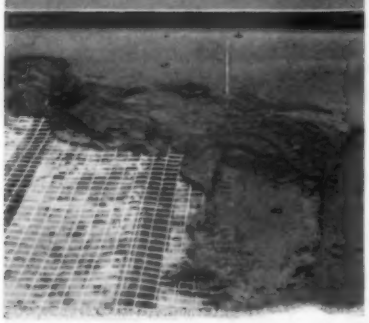
W. E. DUNN MFG. CO.

526 W. 24th St., Holland, Mich.

976 Dundas Highway Cooksville, Ont.

Elastizell®

. . . the best way to make a light weight structural concrete

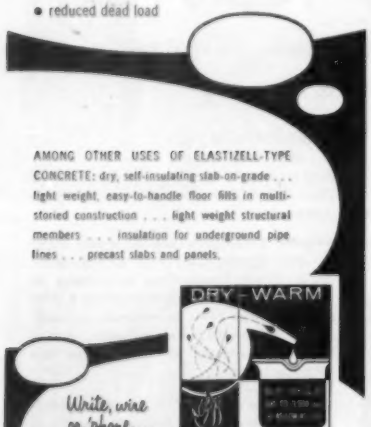


Elastizell-type light weight insulating concrete is here used as an integral pour for both beam and topping in a soffit tile concrete masonry roof. This roof is over steam curing kilns in a concrete block plant.

ADVANTAGES:

- less heat loss through roof, thus reduced block curing cost
- less moisture penetration, thus longer roof life
- greatly reduced initial kiln installation cost, due to far less complex roof construction
- uniform flow around steel, without vibration, for continuous bond
- reduced maintenance cost
- reduced dead load

AMONG OTHER USES OF ELASTIZELL-TYPE CONCRETE: dry, self-insulating slab-on-grade . . . light weight, easy-to-handle floor fills in multi-storied construction . . . light weight structural members . . . insulation for underground pipe lines . . . precast slabs and panels.



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ELASTIZELL CORPORATION OF AMERICA
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'PHONE 1080

EQUIPMENT & MATERIALS

Transistor Mobile Speaker

FOR mobile two-way radio installations, this 6-pound speaker with built-in transistor amplifier, said to be the first of its kind, is claimed to give up to ten times standard output. The speaker element accents voice frequencies but suppresses noise above and below basic voice range. Battery drain is less than 0.3 ampere on standby and 1.0 ampere with full voice output. *Motorola Communications and Electronics, Inc., Technical Information Center,* 4501 West Augusta Boulevard, Chicago, Illinois.

Melting Material

BEING demonstrated here is a chloride free ice and snow melting material in prismoid form, said to be harmless to metals, pavements, and vegetation. As it produces a combined melting and abrasive action, it is recommended for use under spinning auto and truck wheels. The manufacturer says it leaves no residue. It is available in truck or carloads and in drums. *Speco, Inc.* 7308 Associate Avenue, Cleveland 9, Ohio.

Lift Truck Accessory

UNLOADING can be made easier with this unloader accessory, which can be attached to most of the manufacturer's fork lift truck models. It is so constructed that it cannot interfere with the normal operation of the lift truck. The slider arms telescope on rollers so that they will not extend back beyond the cowl in any position. *Towmotor Corporation,* 1226 East 152nd Street, Cleveland 10, Ohio.

Block Splitter

THIS splitter is said to virtually eliminate breakage in splitting colored concrete block. Both upper and lower jaws of the machine have four segregated blades. Three equalizer-adjustment pressure stabilizers for each set allow equal blade pressure to conform to block shape, regardless of block irregularities. The unit weighs approximately 1,000 pounds and makes precision splits at sizes from 1⅝ inches to 8 inches. Machines for up to 26-inch block are available. *Precision Machine Works,* Oklahoma City, Oklahoma.

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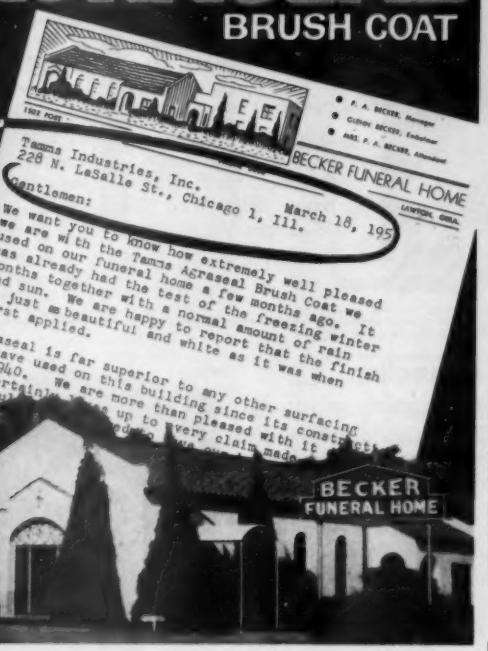
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March 18, 195
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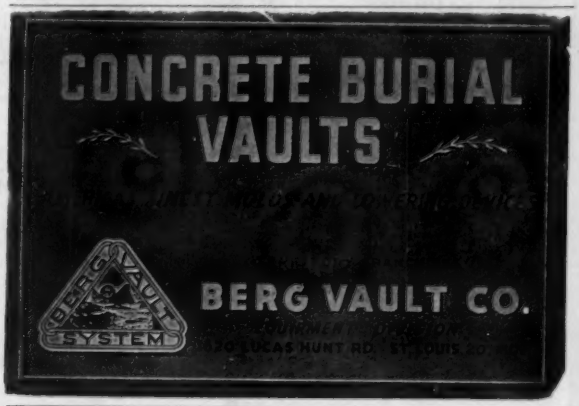

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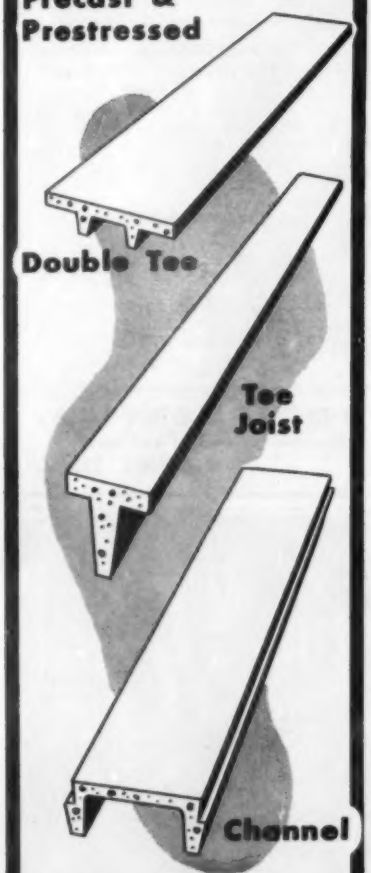

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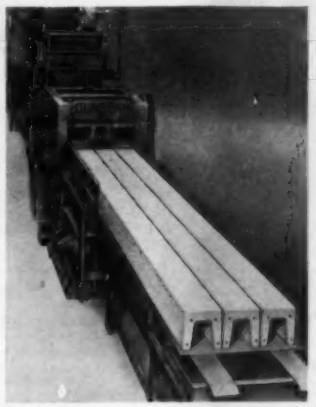
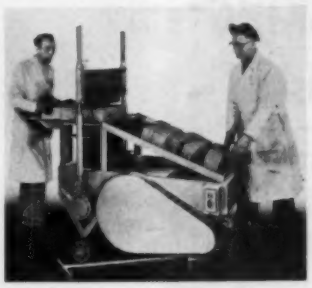


Lintel Machine

PICTURED here is a machine that can produce continuously formed concrete lintels, slabs, and beams at the rate of six feet per minute. The units are shaped by a special assembly in the machine and densified. The 24-inch wide opening can fabricate single or multiple units, depending on their width. Maximum height is 8 inches. *W. E. Dunn Manufacturing Company*, 305 West 24th Street, Holland, Michigan.

Non-Indicating Controller

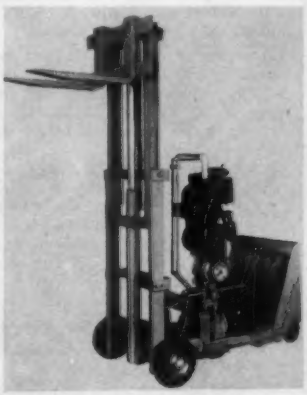
HERE is a non-indicating potentiometer type controller designed for control applications in batch process work. It employs a circuit in which an unknown voltage is connected in opposition to a known voltage, with any difference used to operate the control circuit. A sensing element supplies the unknown voltage. Red and green signal lamps indicate process conditions. Two models are available. *Wheelco Instruments Division, Barber-Colman Company*, Rockford, Illinois.



Portable Block Splitter

COMPLETELY mechanical, this electric powered wheel-mounted block splitter requires only two men to operate it, and makes up to 1200 cuts per hour. It splits any size block up to 12 inches high. Safety features include steel guards over gears, drive pulley and V-Belts, and a protected starting switch to eliminate the danger of accidental starting. The front wheel pivots with the towing handle. *Lith-I-Bar Company*, Holland, Michigan.

High Lift Truck



HERE is a high lift truck especially built for tight working areas and where low floor and elevator load limits are in force. It will pivot 360 degrees, and can stack in 103-inch aisles. The company stresses low cost of the truck, claiming all day operation on 1½ gallons of gasoline. It is powered by a turret-mounted air-cooled engine. Weight of the load is distributed over six pneumatic cushioned tire wheels. *Truck-Man Division, Knickerbocker Company*, 570 Liberty Street, Jackson, Michigan.

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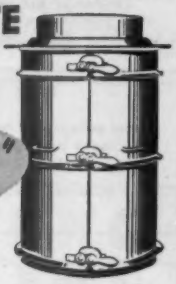
For QUALITY
CONCRETE PIPE FORMS



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Backed by over 45 years of reliable service, the QUINN Heavy Duty form is recognized as the STANDARD design and the finest concrete pipe form everywhere. Used in making pipe by vibration, spading or tamping. Sizes for pipe from 10" to 120" and larger. Tongue and groove (as shown) or bell end pipe in any length desired. If your pipe orders specify extra large sizes, odd shapes or unusual lengths, there's a Quinn form made to produce the finest pipe at lowest possible cost.

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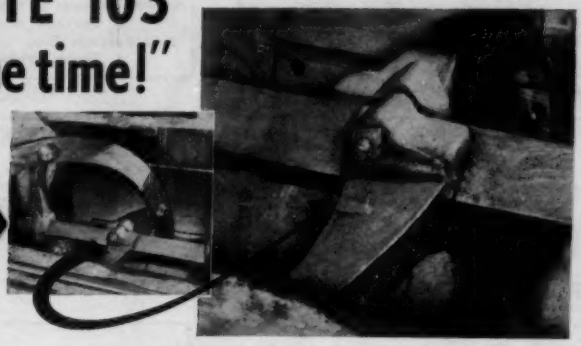
EDI-COTE 103 in half the time!"

says owner* of this 17 year old mixer that looks like new.



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1953 Hydrobloc 3-block, with off-bearing hoist and molds for brick and 4, 6, 8, and 12" block. In good operating condition. For quick sale $3,000.00 f. o. b. Birmingham, Ala.

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Used block machines for immediate delivery.

Model 8 semi-automatic Columbia two block, pallets and racks.

Model 12-12 high Columbia three block with pallet return and magnetic offbearer. Not 1½ years old.

Model LS Lith-I-Bar three block with magnetic offbearer, pallet return and compressor.

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2—Stearns Clipper Strippers	250.00 each
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1—George 28 cu. ft. Concrete Mixer	750.00
1—Continuous Mixer	150.00....
2—Air Offbearers Stearns #7 & 9 .	250.00 each
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2000—8" cored pallets, bevel type, unused

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16—Cure kiln racks

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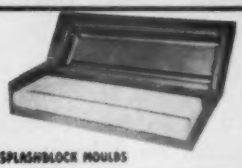
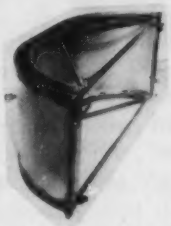


SPLASHBLOCK MOULDS



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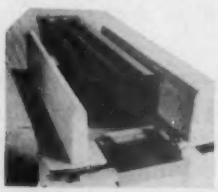

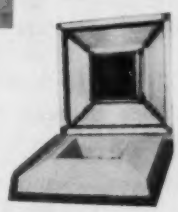

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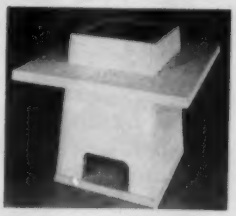

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THE EDITOR'S PAGE

WILLIAM M. AVERY

Just A Darned Minute!

BLOCK producers in the city of Milwaukee deserve to be congratulated for their recent action in converting to the production of modular concrete masonry units. At this moment, however, they could well share the point of view of the cynic who said that virtue must be its own reward, since it certainly isn't any fun.

The sour note in the Milwaukee picture is that the city's project builders just aren't having any part of modular coordination, and they have served notice that unless the block producers resume the manufacture of units that are a full 8 inches high, they (the builders) will either make arrangements to produce their own block or turn to poured concrete for basement work. Since our loyalties and our convictions are firmly rooted in both the block industry and the ready-mixed-concrete industry, we have obviously no purpose to serve by involving ourselves in any ordinary competitive hassle among the producers and the users of these two excellent materials of construction.

But if we correctly interpret the present rumblings from Milwaukee, the issue is by no means an ordinary competitive hassle. The Milwaukee builders who are unhappy about modular units have been in the habit of meeting FHA and VA requirements for basement ceiling height with 10 courses of 8-inch-high block. With 7⅝-inch modular units, of course, they must go to 10½ or 11 courses to meet these standards.

According to the builders, the cost of the additional concrete block and the related labor will run $65 to $75 for a 28- by 40-foot rectangular basement. This, they claim, in an already tightening housing market would price their product completely out of the running.

At this point we want to say, along with the little man from Wistful Vista Terrace, "Just a darned minute!" Unless current housing tastes in Milwaukee run toward roofed-over basements, which we doubt, the same modular sized unit which has increased the below-grade cost of a typical home should have a chance to redeem itself by effecting an even greater reduction in the cost of the above-grade construction. Just now it appears to be true that the only way the builder can take advantage of this potential saving is by using block above grade, but this is hardly the fault of the block maker. The whole concept of modular coordination is to battle the inevitable waste that occurs when manufactured materials and parts must be cut to fit on the job, and the Milwaukee block producers, along with thousands of block makers all over the United States, have struck a major blow in this important cause.

Perhaps, like the pioneers in any movement, they must expect to find the going a little rough. But the fight is surely not theirs alone. At the very least, it seems to us, some tangible support should be forthcoming from such staunch and articulate advocates of modular coordination as the American Institute of Architects and the American Standards Association.

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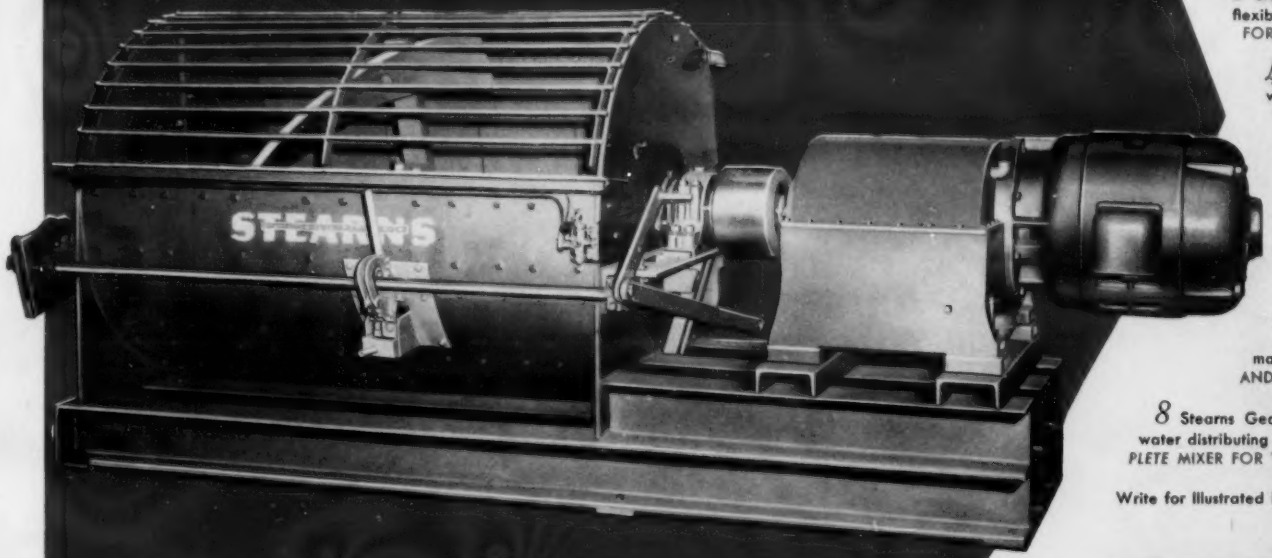

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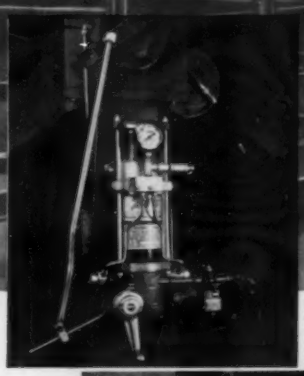
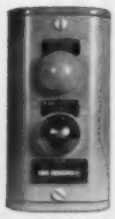
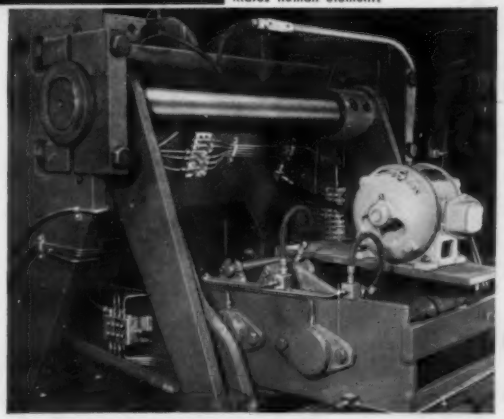


(Left) Positive-feed pump mounted on outboard bearing support of VIBRAPAC machine. Starts and stops automatically with VIBRAPAC . . . eliminates human element.



Signal light indicator at pump. Shows all bearings have been properly lubricated.



Distributor junction blocks with lubrication lines installed on VIBRAPAC. Shows master feeder assembly and ¼" tubing for automatic lubrication of bearings.

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